DRAFT ENVIRONMENTAL IMPACT REPORT
State Clearinghouse Number 2018101010

for

Change of Zone No. 1800007 (CZ1800007)
Plot Plan No. 180024 (PPT180024)
Tentative Tract Map No. 37439 (TTM37439)

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LIST OF COMMONLY USED ABBREVIATIONS AND ACRONYMS

2015 UWMP	EMWD Urban Water Management Plan
2015 RUWMP	MWD Regional Urban Water Management Plan
A-1-5	Light Agriculture, 5-acre minimum
A-2	Heavy Agriculture
A-2-10	Heavy Agriculture, 10-Acre Minimum
A-P	Light Agriculture
AAQS	Ambient Air Quality Standards
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
AC	Acre
ACM	Asbestos Containing Materials
ACOE	U.S. Army Corps of Engineers
ACS	US Census American Community Survey
Act	Alquist-Priolo Earthquake Fault Zoning Act
ADP	Area Drainage Plans
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
Afu	Undocumented Artificial Fill
AFY	acre-feet per year
AG	Agriculture
AIA	March Air Reserve Base/Inland Port Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AM	Morning
AMSL	Above Mean Sea Level
AOC	Area of Concern
APE	Area of Potential Effect
APN	Assessor's Parcel Number
APs	Area Plans
APS	Alternative Planning Strategy
AQ/GHG	Air Quality/Green House Gas
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plans
AWWA	American Water Works Association
ARB	Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BACMs	Best Available Control Measures
Basin	South Coast Air Basin

BAU	Business-As-Usual
BGS	Below Ground Surface
BMPs	Best Management Practices
BNSF	Burlington Northern Santa Fe
BUOW	Burrowing Owl
CA MUTCD	California Manual on Uniform Traffic Control Devices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
CalEEMod™	California Emissions Estimator Model™
Cal/EPA	California Environmental Protection Agency
CalFire	Riverside County Fire Department
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCA	Concrete Culvert Alternative
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CD	Community Development
CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CD:MDR	Community Development: Medium Density Residential
CDOGG	California Division of Oil, Gas and Geothermal Resources
CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System list
CESA	California Endangered Species Act
CETAP	Community Environmental Transportation Acceptability Program
CFD	Community Facilities District
CFR	Code of Federal Regulations
CH4	Methane
CHHSLs	California Human Health Screening Levels

CHP	California Highway Patrol
CIP	Capital Improvement Program
CIWMP	Countywide Integrated Waste Management Plan
CLUP	Airport Land Use Compatibility Plan
CMA	Congestion Management Agency
CML&C	Concrete-Mortar Lined and Coated
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	Carbon
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
COA	Conditions of Approval
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
CRA	Cultural Resources Assessment
CRDEH	County of Riverside Department of Environmental Health
CSA	County Service Area
CUPA	Certified Unified Program Agency
CWA	Federal Clean Water Act
CY	Cubic Yards
CZ	Change of Zone
dB	Decibel
dBA	A-Weighted Decibel
DBESP	Determination of Biologically Equivalent or Superior Preservation
DEIR	Draft Environmental Impact Report
DIF	Development Impact Fee
DMA	Drainage Management Area
DNL	Day/Night Average Sound Level
DOT	Department of Transportation
Dt	Domino Fine Sandy Loam, Saline-Alkali
DTSC	Department of Toxic Substance Control
DU	Dwelling Units
DU/AC	Dwelling Units Per Acre
Dv	Domino Silt Loam, Saline-Alkali
DWR	Department of Water Resources
E+P	Existing plus Project
EA	Environmental Assessment
EAP	Existing Plus Ambient Growth Plus Project
EAPC	Existing Plus Ambient Growth Plus Project Plus Cumulative

ECC	Emergency Command Center
EDR	Estate Residential
EDR/RR	Estate Density Residential and Rural Residential
EIA	Energy Information Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emissions FACtor model
EMSA	Emergency Medical Service Authority
EMWD	Eastern Municipal Water District
EnA	Exeter Sandy Loam, 0 To 2 Percent Slopes
EO	Executive Order
EoB	Exeter Sandy Loam, Slightly Saline-Alkali, 0 To 5 Percent Slopes
EPA	Environmental Protection Agency
EpA	Exeter Sandy Loam, Deep, 0 To 2 Percent Slopes
EPS	Emission Performance Standard
ERCI	Emergency Responses, Complaints and Investigation
ERNS	Emergency Response Notification System
ERRP	Enhanced Recharge and Recovery Program
ESA	Environmental Site Assessment
ETo	evapotranspiration
EwB	Exeter very fine sandy loam, 0 to 5 percent slopes
EyB	Exeter very fine sandy loam, deep, 0 to 5 percent slopes
°F	Fahrenheit
FBFMs	Flood Boundary & Floodway Maps
FDPA	Flood Disaster Protection Act
FEMA	Federal Emergency Management Act
FERC	Federal Energy Regulatory Commission
FHBM	Flood Hazard Boundary Map
FHWA	Federal Highway Administration
FIA	Fiscal Impact Analysis
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Studies
FMMP	Farmland Mapping & Monitoring Program
FPER	Fire Protection and Emergency Response Services
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
FY	fiscal year
GHG	Greenhouse Gas
g/m3	Micrograms Per Cubic Meter

GMZs	Groundwater Management Zones
GPA	General Plan Amendment
gpd/ac	Gallons-Per-Day Per Acre
GPEIR	General Plan Environmental Impact Report
GWh	gigawatt-hours
GWP	Global Warming Potential
HCD	Housing and Community Development
HCM	Highway Capacity Manual
HCOC	Hydrologic Conditions of Concern
HCP	Habitat Conservation Plan
HECW	High-Efficiency Clothes Washers
HETs	High-Efficiency Toilets
HFCs	Hydroflourocarbons
HHD	heavy-heavy duty trucks
HPLV	High Pressure Low Volume
HOV	High-Occupancy Vehicle
HOA	Home Owners Association
HQTA	High Quality Transportation Area
HVAC	Heating, Ventilation, And Air Conditioning Units
HV/WAP	Harvest Valley/Winchester Area Plan
HWCL	Hazardous Waste Control Law
Hz	Hertz
IA	Implementing Agreement
IBC	International Building Code
IC/EC	Institutional Controls / Engineering Controls registries
ICLEI	International Council for Local Environmental Initiatives
IGR	Inter-Governmental Review
IPCC	Intergovernmental Panel on Climate Change
IPR	Indirect Potable Reuse
IS	Initial Study
ISO	Independent Service Operator
ITE	Institute of Transportation Engineers
JD	Jurisdictional Delineation
JPA	Joint Powers Agreement
kW	Kilowatt
KWh	Kilowatt Hours
LAFCO	Local Agency Formation Commission
LBP	Lead Based Paint
LCC	Land Capability Classification
LDA	light duty autos

LDN	Day-Night Average Noise Level
LE	Land Evaluation
LESA	Land Evaluation & Site Assessment
LEQ	Equivalent Sound Level
LF	Linear Feet
LHMWD	Lake Hemet Municipal Water District
LID	Low Impact Development
LLUMC-M	Loma Linda University Medical Center – Murrieta
LOS	Level of Service
LST	Localized Significance Thresholds
MAC	Municipal Advisory Council
March ALUCP	March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan
MBTA	Migratory Bird Treaty Act
MELO	Model Efficient Landscape Ordinance
MCL	maximum contaminant level
MD	Medium Density Residential
MDP/ADP	Menifee Valley Master Drainage Plan/Area Drainage Plan
MDR	Medium Density Residential
MFCS	Matthew Fagan Consulting Services
MGD	Million Gallons Per Day
MGPEIR	Murrieta General Plan Environmental Impact Report
MHD	medium-heavy duty trucks
MM	Mitigation Measure
MMT	Million Metric Tons
MOU	Memorandum of Understanding
MPH	Miles Per Hour
MPOs	Metropolitan Planning Organizations
mpg	miles per gallon
MS4	regulated small municipal separate storm sewer system
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MTCO2e	Metric Tons of Carbon Dioxide Equivalent
MUSD	Murrieta Unified School District
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District of Southern California
MWh	Megawatt-Hour
N2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Conservation Community Plan
NCHRP	National Cooperative Highway Research Program Report

NDIR	Non-Dispersive Infrared Photometry
NEPA	National Environmental Policy Act
NEPSSA	Narrow Endemic Plants Survey Area
NEV	Neighborhood Electric Vehicle
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NFRAP	No Further Assessment Planned site list
NHPA	National Historic Preservation Act of 1966
NIOSH	National Institute for Occupational Safety and Health
NMTP	Non-Motorized Transportation Plan
NO2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO_X	Nitrogen Oxide
NPA	No Project Alternative
NPDES	National Pollution Discharge Elimination System
NPDWRs	National Primary Drinking Water regulations
NPL	National Priority List
NR	noise reduction
NRCS	Natural Resources Conservation Service
NPMS	National Pipeline Mapping System
NPS	Non-Point Source
O3	Ozone
OAL	Office of Administrative Law
OCP	organochlorine pesticide
OEHHA	Office of Environmental Health Hazard Assessment
OSC-70	Open Space and Conservation Policy 70
OES	Office of Emergency Services
OFM	Office of the County Fire Marshal
OFP	Ozone Forming Potential
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Development
OS-R	Open Space Recreation
OS-W	Water
Pb	Lead
pc/mi/ln	Passenger Cars Per Mile Per Lane
PDA	Protector del Agua
PEIR	Program EIR
PeMS	Performance Measurement System
PFCs	Perfluorocabons

PHF	peak hour factor
PHS	Preliminary Hydrology Study
PM	Afternoon
PM10	Respirable Particulate Matter
PM2.5	Fine Particulate Matter
POTWs	publicly owned treatment works
Ppb	Parts Per Billion
Ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PUHSD	Perris Union High School District
PVC	Polyvinyl Chloride
PV	Photovoltaic
PVRWRF	Perris Valley Regional Water Reclamation Facility
Qoal	Older Alluvium
R-1	One Family Dwelling
R-4	Planned Residential
R-A	Residential Agriculture
R-A-5	Residential Agricultural - 5 Acre Minimum
RBBD	Southwest Road and Bridge Benefit District
RC	Rural Community
RCB	Reinforced concrete box
RC:EDR	Rural Community: Estate Density Residential
RCFC&WCD	Riverside County Flood Control and Water Conservation District
RCFD	Riverside County Fire Department
RCHCA	Riverside County Habitat Conservation Agency
RCIP	Riverside County Integrated Project
RC-LDR	Low Density Residential
RCLIS	Riverside County Land Information Systems
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RCTC	Riverside County Transportation Commission
RC-VLDR	Very Low Density Residential
RCWD	Rancho California Water District
REC	Recognized Environmental Condition
REMEL	Reference Energy Mean Emission Level
RHNA	Regional Housing Needs Assessment
RivTAM	Riverside County Transportation Analysis Model
RMS	root mean square

ROG	Reactive Organic Gases
ROW	Right(s)-of-Way
RPIA	Reduced Project Intensity Alternative
R-R	Rural Residential
RDA	Redevelopment Agency
RTA	Riverside Transit Authority
RTP	Regional Transportation Plan
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
RWRF	Regional Wastewater Reclamation Facility
SA	Site Assessment
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCGC	Southern California Gas Company
SCH	State Clearinghouse
SCHWMA	Southern California Hazardous Waste Management Authority
SC/MVAP	Sun City/Menifee Valley Area Plan (also SCMVAP)
SCS	Sustainable Communities Strategy
SDA	Subsurface Drainage Alternative
SDWA	Safe Drinking Water Act
SF6	Sulfur Hexafluoride
SFHA	Special Flood Hazard Area
SFP	School Facilities Program
SHMA	Seismic Hazard Mapping Act
SHS	State Highway System
SKR	Stephen's kangaroo rat
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations and Cleanup
SO2	Sulfur Dioxide
SO_X	Oxides of Sulfur
SMARA	The Surface Mining and Reclamation Act of 1975
SoCAB	South Coast Air Basin
SOP	Standard Operating Procedures
SP	Specific Plan
Sq. Ft.	Square Feet
SR-74	State Route 74

SRA	Source Receptor Area
STC	Sound Transmission Class
s/v	Seconds Per Vehicle
SWFP	Solid Waste Facility Permit
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TAC	Toxic Air Contaminant
TCP	Traffic Control Plan
TCR	Tribal Cultural Resource
TDA	Transportation Demand Management
TDS	Total Dissolved Solids
TIA	Traffic Impact Analysis
TIS	Traffic Impact Study
TLMA	Transportation Land Management Agency
TR	Tentative Tract Map
TSD	Treatment, Storage and Disposal facility list
TTCP	Traditional Tribal Cultural Places
TTM	Tentative Tract Map
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code
ULFT	Ultra-Low-Flush Toilets
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
V/C	Volume to Capacity
VCP	Vitrified Clay Pipe
VdB	Decibel notation
VEC	Vapor Encroachment Condition
VES	Vapor Encroachment Screen
VLF	Vehicle License Fee
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VPD	Vehicles Per Day

VWRPD	Valley Wide Recreation and Park District
Wd	Waukena Loam, Saline-Alkali
WDL	Water Data Library
WMD	Waste Management Department
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Council of Governments
WRP	Waste Recycling Plan
WSA	Water Service Agreement
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan
WSP	Water Supply Plan

Volume 2 – Technical Appendices - See *Enclosed CD*

Appendix A: *Map My County.*

Appendix B: Site Photos, April 18, 2018.

Appendix C: *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis,* prepared by Urban Crossroads, Inc., February 27, 2019.

Appendix D: *Canterwood Project (Tentative Tract Map No. 37439) General Biological Assessment,* prepared by Helix Environmental Planning, Inc., September 4, 2018.

Appendix E: *A Phase I Cultural Resources Assessment of Tentative Tract No. 37439 and Associated Off-Site Infrastructure Improvements*, prepared by Jean A. Keller, Ph.D., March 2018.

Appendix F: *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018.

Appendix G: *Canterwood (Tentative Tract Map No. 37439) Greenhouse Gas Analysis,* prepared by Urban Crossroads, Inc., February 27, 2019.

Appendix H1: *Phase I Environmental Site Assessment, for Tract 37439 and Channel Improvement APNs 466-120-019, 466-120-002, 466-120-022*, *466-310-026, 466-310-002,* prepared by RMA GeoScience, March 5, 2018.

Appendix H2: *Additional Chemical Testing for Tract 37439, APNs 466310026, and 466310002, SE of Briggs Rd. and Holland Rd., Winchester, CA 92596*, prepared by RMA GeoScience, September 11, 2018.

Appendix H3: *Phase I Environmental Site Assessment Northwest Corner of APN 364-200-007,* prepared by RMA GeoScience, March 29, 2018.

Appendix I1: *Project Specific Water Quality Management Plan Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018.

Appendix I2: *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018.

Appendix J: *Canterwood (Tentative Tract Map No. 37439) Noise Impact Analysis,* prepared by Urban Crossroads, Inc., September 19, 2018.

Appendix K: *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis,* prepared by Urban Crossroads, Inc., June 5, 2018.

Appendix L: *Assembly Bill 52 (AB 52) Formal Notification (TTM 37439, CZ 1800007)*, prepared by County of Riverside, April 2, 2018.

Appendix M: *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., March 2019.

Appendix N: *Water Supply Assessment Report, Canterwood Project,* prepared by Eastern Municipal Water District, February 21, 2018.

Appendix O: *San 53* (*Sewer and Water Availability) APNs 466-310-002, 466-310-026*, prepared by Eastern Municipal Water District, February 5, 2018.

Appendix P: *Canterwood (TTM No. 37439) Traffic Impact Analysis - Vehicle Miles Traveled*, prepared by Urban Crossroads, Inc., February 28, 2019.

Appendix Q: *Canterwood (TTM No. 37439) Energy Analysis*, prepared by Urban Crossroads, Inc., February 27, 2019.

Appendix R: *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020.

Paleontological Resources Assessment Report Tentative Tract Map Number 37439, prepared by CRM TECH, January 2, 2018 (**Initial Study Appendix J**).

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CHAPTER 1 – EXECUTIVE SUMMARY

This Executive Summary for the Canterwood Project (proposed Project) Draft Environmental Impact Report (DEIR) summarizes the environmental effects that are forecast to occur from implementation of the proposed Project. It also contains a summary of the Project background, Project objectives, and Project description. A table summarizing environmental impacts, mitigation measures, and mitigation responsibility is included at the end of this Executive Summary.

1.1 PROJECT BACKGROUND

The Sun Holland, LLC (Project proponent) proposes to implement a Change of Zone No. 1800007 (CZ 1800007), Plot Plan No. 180024 (PPT180024), and Tentative Tract Map No. 37439 (TTM 37439) to allow the subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. The proposed Canterwood property is divided into both on-site (residential) and off-site (improvements) components; these are located as follows:

1. Residential Project Site Components

West of Eucalyptus Road; north of Craig Avenue; east of Leon Road; and south of Holland Road. Assessor Parcel Numbers (APNs) 466-310-026 and 466-310-002.

2. Off-Site Project Components

- Sewer: westerly within the Holland Road right-of-way (ROW), westerly within the EMWD easement, westerly within the Tres Lagos Drive ROW where it will terminate into an existing sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.
- Offsite Drainage Trapezoidal Earthen drainage facilities: The trapezoidal earthen drainage channel will extend from the existing Reinforced Concrete Box culver at Southshore Drive and extend to the south east, within Tract Map 31229 (Nautical Cove) Project Site to Holland Road and Briggs Road. A culvert system will be proposed under the intersection of Holland and Briggs Roads, where the culvert crosses diagonally. The channel will extend to the east from Briggs Road and Holland Road to Leon Road. In closing the channel will commence downstream at the Summerhouse residential community, south of Tres Lagos Drive and terminate at Leon Road.
- Holland Road roadway improvements: along Holland Road south of the San Pedro Farms Project (TTM 36467) between Leon Road and Briggs Road.
- APNs 466-120-023, 466-120-014, 466-120-021, 466-120-011, 466-120-022, 466-120-002, 466-120-019, and 364-200-007.

The County of Riverside is serving as the Lead Agency for compliance with the California Environmental Quality Act (CEQA) based on its responsibility to approve the proposed CZ, PPT, and TTM and grant entitlements for the proposed Project. The decision to prepare an Environmental Impact Report (EIR) was based on the finding that the proposed Project may have one or more significant effects on the existing Project environment and surrounding environment as is documented in the Notice of Preparation (NOP). The NOP and the NOP distribution list and the surrounding property owners list are contained in Subchapter 8.1, *Notice of Preparation / NOP Distribution List*, of this DEIR. The County prepared and circulated the NOP for the Project. The State Clearinghouse distributed the NOP (*SCH#2018101010*) to the interested agencies identified

by the County, and to surrounding property owners within a 600' radius of the Project site both residential and off-site components. The NOP public review period began on October 8, 2018 and ended on November 6, 2018. Respondents were asked to send their input as to the scope and content of the environmental information and issues that should be addressed in the Project DEIR no later than the end of the 30-day review period.

The County held a Scoping Meeting on Monday, November 5, 2018 at 1:30 p.m., at the Riverside County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, in Conference Room 2A on the 1st Floor. The date, time, and location of the scoping meeting was announced in the NOP. Seven (7) written responses were submitted in response to the NOP. No comments were provided at the scoping meeting. Subchapter 8.2, *NOP Comment Letters* includes a copy of each NOP comment letter received during the comment period and comments are also summarized in Chapter 2, *Introduction*, with a reference to where the issue will be addressed in Chapter 4, *Environmental Impact Evaluation*.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. Two new environmental topics (Energy and Wildfire) were introduced to be analyzed in future Initial Studies; these environmental topics are being added to the DEIR to be analyzed and are presented as follows:

- Energy (Subchapter 4.18)
- Wildfire (Subchapter 4.19)

The County has prepared a DEIR for the Canterwood Project that evaluates the potential environmental impacts that would result from constructing and implementing the proposed Project. Because this Project includes a subdivision map, the focus of the analysis, in accordance with Section 15146 of the State CEQA Guidelines, addresses the specific effects of the proposed Project as presented in TTM 37439. However, it is the combination of entitlements requested for this Project that must be approved by the County to allow development shown in TTM 37439 to be implemented.

1.2 INTENDED USE OF THIS ENVIRONMENTAL IMPACT REPORT

This DEIR has been prepared in accordance with the CEQA Statutes and Guidelines, 2018, pursuant to Section 21151 of CEQA. The County of Riverside is the Lead Agency for the Project and has supervised the preparation of this DEIR. This DEIR is an information document which will inform and assist public agency decision makers and the general public of the potential environmental effects, including any significant impacts that may be caused by implementing the proposed Project. Possible ways to minimize significant effects of the proposed Project and reasonable alternatives to the Project are also identified in this DEIR.

This document assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the construction and operation of the proposed Project. This DEIR is also intended to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of this Project. Other agency approvals (if required) for which this environmental document may be utilized include:

- South Coast Air Quality Management District;
- Riverside County Airport Land Use Commission;

- Riverside County Flood Control and Water Conservation District;
- Riverside County Transportation Department;
- Eastern Municipal Water District (EMWD);
- Riverside County Department of Environmental Health (for well closures/relocations); and
- Regional Water Quality Control Board, Santa Ana Region.

1.3 PROJECT OBJECTIVES

The proposed Project consists of 574 residences; onsite infrastructure to support these residences; recreational areas to meet Project-specific needs; and offsite infrastructure to support the proposed Project. The following represent the proposed Project's objectives:

- Provide a variety of housing opportunities to assist the County in meeting General Plan Housing Element Goals and Objectives;
- Provide a centrally located community park with active and passive recreational opportunities that meets the recreation needs of future residents;
- Develop a comprehensive interconnected public trail and walkway system within the Project and connecting to the County-wide trail system;
- Develop joint use maintenance roads which will serve as hiking trails when adjacent to regional drainage facilities;
- Development of a comprehensive Project design that is sensitive to the environment, aesthetically pleasing, provides for the protection of health and safety, and promotes the neighborhood, the community, the County and the region;
- Take into consideration the existing topographic, geologic, hydrologic, and environmental opportunities and constraints, and create a Project design that essentially conforms to the condition of the land by maintaining and using basic landforms where practical; and
- Establish a Project-wide circulation system that meets regional and local transportation needs and accommodates a variety of transportation modes, including roadways, sidewalks and bicycle lanes.

1.4 PROJECT APPROVALS

This DEIR will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the CEQA lead agency, County of Riverside: Change of Zone No. 1800007 (CZ 1800007), Plot Plan No. 180024 (PPT180024), Tentative Tract Map No. 37439 (TTM 37439) (which includes Amended Tentative Tract Map 37439 and Tentative Tract Map 37439 Phasing Maps), and Tentative Parcel Map No. 37864 (TPM 37864) Schedule J.

1.5 IMPACTS

Based on data and analysis provided in this DEIR, it is concluded the proposed Project could result in significant adverse environmental impacts, even with inclusion of mitigation measures, to the following environmental issues: Air Quality, and Noise. All other potential Project impacts were determined to be less than significant without mitigation or can be reduced to a less than significant level with implementation of the mitigation measures identified in this DEIR. Impacts related to flood control facility maintenance are less than significant and do not require mitigation. Note that the cumulative significant impacts are identified in this document based on findings that the Project's contributions to such impacts are considered to be cumulatively considerable which is the threshold identified in Section 15130 of the State CEQA Guidelines.

Table 1-2, ***Summary of Impacts and Mitigation Measures Discussed in this Draft EIR***, in Section 1.8, summarizes all the environmental impacts and proposed mitigation and monitoring measures identified in this DEIR and will be provided to the decision-makers prior to finalizing the EIR.

The following issues evaluated in the DEIR have been determined to experience less than significant impacts based on the facts, analysis, and findings in this DEIR.

Aesthetics

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. However, this change was anticipated under the General Plan Land Use Plan. The General Plan EIR (Section 4.4.3) states:

> "*Build out of the proposed General Plan would result in a substantial increase in urban uses throughout the proposed General Plan area. The development of structures and facilities would occur on vacant properties within unincorporated areas of the County and would be consistent with the policies outlined in the proposed General Plan. Similarly, the replacement, expansion, or refurbishment of existing development would occur pursuant to the proposed General Plan policies...*"
>
> and concludes:
>
> "*The proposed General Plan includes policies that will: concentrate growth near or within existing urban and suburban areas; preserve the existing rural and open space character of the County; provide for the permanent preservation of important natural and scenic resources; incorporate open space within developed areas; ensure the compatibility of existing and new development; maintain or enhance the character of the project site and its immediate area; conserve view corridors, skylines, and scenic vistas; and impose restrictions on development activities that may adversely affect the existing visual characteristics of sites within the County. Furthermore, Appendix J of the proposed General Plan contains Community Center Guidelines, that address landscape, streetscape, building, layout, and other aspects of the community centers. Adherence to these guidelines would reduce or eliminate aesthetic impacts relating to community center development.*"

While there will be an associated change in views, both to and from the Project site, with adherence to **Standard Conditions SC-AES-1** through **SC-AES-5**, the impacts are considered less than significant. While the impacts are unavoidable, they are not considered significant, or adverse.

Agriculture and Forest Resources

The Project will have a less than significant impact as it pertains to the conversion of 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, in a conflict with existing agricultural zoning or agricultural use, or cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm") (see **Standard Condition SC-AG-1**). No unavoidable significant impact to agricultural and/or forestry resources will result from implementing

the proposed Project. The Project's impact to agriculture and/or forest resources is a less than significant adverse impact.

Mitigation Measure MM-AG-1 has been included proposed to reduce conflicts between the Project and existing agricultural uses in proximity of the Project site (based on changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use) to a less than significant level.

Since the proposed Project will not have any significant adverse impact to agricultural or forestry resources or resource values, it cannot make a cumulatively considerable contribution to such resources or values. The Project's cumulative agriculture/forest impacts are considered less than significant.

Biological Resources

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently exists or can occur on the site or in the surrounding vicinity. The proposed Project will not cause adverse cumulative effects related to the reduction of sensitive vegetation communities or degradation of other biology values present in western Riverside County.

With adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1, MM-BIO-2*,*** and **MM-BIO-3**, the Project will have a less than significant substantial adverse effect.

The proposed Project is not forecast to cause significant unavoidable adverse impacts to biological resources. Project biology impacts are less than significant.

Cultural Resources

The proposed Project, in conjunction with other future development in the County, has the potential to cumulatively impact cultural and/or archaeological resources.

However, CEQA requires the County to conduct an environmental review of each project submitted. If the project has the potential to result in a significant impact to cultural, archaeological, and/or paleontological resources, CEQA requires the County to require the project proponent to investigate the site to determine the nature and extent of the existing resources and identify appropriate mitigation measures. If subsurface cultural and/or archaeological resources are assessed and/or protected as they are discovered, impacts to these resources will be less than significant. In addition, applicable General Plan policies will be implemented to reduce the effects of future development in the County.

With implementation of **Standard Condition SC-CUL-1**, and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, the Project's contribution to the cumulative loss of known and unknown cultural and/or archaeological resources in the County will be reduced to a level of less than significant.

Implementation of the proposed Project will not result in any unavoidable Project-specific or cumulative adverse impacts to cultural and/or archaeological, resources.

Geology and Soils

The existing geology and soil resources and constraints have been evaluated for impact to and from the implementation of the Project. No unavoidable significant adverse geology or soil impacts have been identified in the IS or DEIR. **Standard Conditions SC-GEO-1** through **SC-GEO-3**, **SC-AQ-2**, and **SC-HYD-1** through **SC-HYD-3** have been identified, that must be implemented to control exposure to potentially strong seismic ground shaking, seismic ground shaking – including liquefaction, soil erosion and loss of topsoil, lateral spreading, subsidence, expansive soils and collapse. With implementation of the recommended seismic design measures, structures and future residents or inhabitants of these structures, can be adequately protected. The Project can be implemented without causing or experiencing significant unavoidable adverse geology or soil impacts.

The Project can be implemented without causing or experiencing significant unavoidable adverse geology or soil impacts.

Greenhouse Gas Emissions

GHG emissions are assumed to be cumulative. An individual project, such as the proposed Project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate.

However, the proposed Project may contribute to global climate change by its incremental contribution of greenhouse gases. With implementation of **Standard Condition SC-GHG-1,** and **Mitigation Measure MM-GHG-1,** emission rates will be consistent with applicable significance thresholds established by the Climate Action Plan. With implementation of these mitigation measures, impacts would be reduced to a less than significant level.

Project-related GHG emissions are not considered to be significant or adverse and will not result in an unavoidable significant adverse impact on global climate change.

Hazards and Hazardous Materials

The Project will change the land use on the Project site and create a potential for certain adverse impacts regarding hazards and hazardous material issues both during construction and occupancy. There will be some adverse impacts as a result of implementing the Project. However, adherence to **Standard Conditions SC-HAZ-1**, **SC-HYD-1**, **SC-HYD-2**, **SC-PS-1**, and **SC-TR-2**, and incorporation of **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**, these potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level for hazards and hazardous material issues. Thus, the Project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts. The Project hazard and hazardous material impacts are less than significant.

Hydrology and Water Quality

The proposed Project has a potential to result in generation of new pollutants from the proposed urban/suburban environment that can degrade water quality. However, through a combination of design measures included in the drainage design (Project Specific) and **Standard Conditions SC-HYD-1** through **SC-HYD-5**, these potential hydrology and water quality impacts can be controlled to a less than significant impact level. The proposed Project will not cause unavoidable significant hydrology or water quality impacts. Project hydrology and water quality impacts are less than

significant.

Land Use and Planning

The Project will represent a change to a rural area that will result in a suburban form of development. This form of development is anticipated in the General Plan for the Project site and the environs surrounding the Project site. The Project would disrupt or divide the physical arrangement of an established community (agricultural, vacant, or large lot single-family residential); however, this impact will be less than significant.

The proposed Project would not represent a change to the County's General Plan Land Use Plan; however, it will represent a change to the County's Zoning Map. Based on the data and analysis presented in this Subchapter, implementation of the proposed Project will not cause significant unavoidable adverse impacts relative to the land use and planning.

Mineral Resources

As described in the IS, the Project site and surrounding area do not contain any existing mineral development or any identified potential for mineral resource development. Based on these data, the proposed Project has no potential to cause any unavoidable adverse impact to mineral resources or values in Riverside County.

Paleontological Resources

According to the IS, the proposed Project site is mapped in the *General Plan* as having a "High Potential" for paleontological resources (fossils). This category encompasses lands for which previous field surveys and documentation demonstrates a high potential for containing significant paleontological resources subject to adverse impacts. As such, this Project is anticipated to require direct mitigation for paleontological resources. **Standard Condition SC-PAL-1** (Condition of Approval 060 – Planning-PAL), shall be implemented.

County Paleontological Report (PDP) No. 1596, submitted for this Project (TTM37439), was prepared by CRM Tech, Inc. and is entitled "Paleontological Resources Assessment Report, Tentative Tract Map Number 37439, in and near the City of Menifee, Riverside County, California", dated January 2, 2018 (**Appendix J**, of the Initial Study. Provided on CD at the back of this DEIR.).

PDP01596 concluded:

Based on the research results presented, the Project's potential to impact significant paleontological resources is determined to be low in the extensively disturbed, course-grained surface sediments but high in the relatively undisturbed, finer-grained, older Pleistocene sediments that are anticipated below the surface in most of the Project area.

PDP01596 recommended:

CRM TECH recommends that a paleontological resource impact mitigation program (PRIMP) be developed and implemented during the Project to prevent such impacts or reduce them to a level less than significant. The mitigation program should be developed in accordance with the provisions of CEQA as well as the proposed guidelines of the Society of Vertebrate Paleontology (2010).

PDP01596 satisfies the requirement for a Paleontological Resource Assessment for CEQA purposes. PDP01596 was accepted for TTM37439 in the Conditions of Approval. A PRIMP shall be required prior to issuance of a grading permit for this Project.

Standard Condition SC-PAL-1 is not considered unique mitigation under CEQA. Therefore, with adherence to **Standard Condition SC-PAL-1**, any Project impacts that could directly or indirectly destroy a unique paleontological resource, or site, or unique geologic features would be less than significant.

Population and Housing

The proposed Project would not cumulatively exceed official regional or local population projections; and, it would not induce directly substantial population growth in an area. No significant adverse impacts are anticipated.

Indirect impacts from the installation of new infrastructure to serve the Project and the region, while anticipated under the General Plan, will be potentially less than significant.

Public Services

Fire Services

According to the IS, as part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 services, are considered incremental, and less than significant.

Sheriff Services

According to the IS, as part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to sheriff services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for sheriff services will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for sheriff services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires

payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 sheriff services, are considered incremental, and less than significant.

Schools

According to the IS, implementation of the proposed Project will result in an incremental impact on the demand for school services. The Residential Project site components are located with the Menifee Union School District (MUSD), for kindergarten through 8th grades, and Perris Union High School District (PUHSD) for 9th-12th grades.

The following student generation factors are utilized by MUSD for single-family detached units:

- Elementary school: 0.3038/dwelling unit
- Middle school: 0.1396/dwelling unit

The following student generation factors are utilized by PUHSD for single-family detached units:

- High school: 0.1043/dwelling unit

Based on 574 residential units, the Project will generate the following approximate number of students:

- Elementary school: 175
- Middle school: 80
- High school: 60

Impacts to MUSD and PUHSD facilities will be offset through the payment of impact fees to the MUSD and PUHSD, prior to the issuance of a building permit. MUSD and PUHSD residential rates are currently $2.73 per square foot, and $1.09 per square foot, respectively. This fee is subject to change, and the applicable fees, at time of building permit issuance, shall apply.

Payment of these fees (**Standard Condition SC-PS-2**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. After payment of these fees, any impacts will be considered less than significant.

Libraries

According to the IS, library impacts are typically attributed to residential development. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for libraries will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for library services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

With payment of the DIF, any impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 library services, are considered less than significant.

Health Services

As discussed in the IS, the Project proposes 574 single-family residences and would have a build-out population of approximately 1,757 persons (based on 3.06 persons per single-family residential household). This increase in population to the Project area will create a need for additional health and medical services.

The Riverside County General Plan EIR states that impacts to medical facilities will be significant as a result of population increase. The following General Plan EIR Mitigation Measure (4.15.7A) was adopted with the County's General Plan in 2003 to aid in the reduction of significant impacts:
Mitigation Measure (4.15.7A):

> *Riverside County shall perform a periodic medical needs assessment to evaluate the current medical demand and level of medical service provided within each Area Plan. A periodic medical needs assessment shall be conducted every three years.*

As the County's population grows, new medical facilities will be required to provide health and medical services for an expanded population. Since the Project is consistent with the County's General Plan Land Use Plan designation of Community Development: Medium Density Residential (CD:MDR), the proposed Project's impact the County-wide health and medical facilities would be similar to what was anticipated in the County's General Plan.

Medical offices, urgent care clinics, local medical services, hospital beds and major facilities, such as trauma units and emergency rooms are available within proximity of the Project site. This fact, coupled with the Periodic Medical Needs Assessment, which is required by Mitigation Measure 4.15.7A of the County General Plan EIR, can ensure that adequate health and medical services are available to the Project residents. Based on this analysis, the potential impacts related to health services are considered less than significant.

Recreation

The existing recreation resources and system in the vicinity of the proposed Project would be impacted by the Project from the new residential units and associated population. The Project will develop recreation facilities (including the 8.96-acre community park, the installment of sidewalks, the development of a portion of the Regional Trail required by the HVWAP, and bike lanes), and will pay DIF fees as required by Ordinance No. 659. The development of these recreational facilities and this DIF fee payment will ensure that the proposed Project will not cause significant unavoidable adverse impacts to the area recreation resources.

Based on the analysis above, no significant adverse impacts were attributable to the Project on transportation/traffic resources.

Tribal Cultural Resources

All potential tribal cultural resources impacts would be limited and can be reduced to a less than significant impact level with adherence to **Standard Condition SC-CUL-1**, and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to tribal cultural resources from implementing the Project as proposed. The Project tribal cultural resource impacts are less than significant.

Utilities and Service Systems

Water and wastewater management systems are capable of meeting the cumulative demand for these systems. With adherence **Standard Conditions SC-USS-1** through **SC-USS-4**, and **SC-HYD-4**, impacts are considered less than significant. Thus, the Project will not cause cumulatively considerable significant adverse impacts on these systems. With implementation of the proposed stormwater management design, as outlined in **Standard Conditions SC-HYD-1** through **SC-HYD-3**, future stormwater runoff after development of the Project site will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and is not forecast to make a cumulatively considerable contribution to downstream flood hazards in the Santa Ana River Watershed.

In addition, with adherence to **Standard Condition SC-PS-1**, for the maintenance of public facilities, including roads and other governmental services, any impacts will be less than significant and will not result in a significant cumulative impact.

Mitigation measures are provided to reduce overall energy consumption. **Mitigation Measure MM-GHG-1** will reduce the energy demand of the proposed Project. In addition, **Mitigation Measure MM-GHG-1** is designed to increase the water and energy efficiency of the buildings such that the per capita electrical demand of the residences would be substantially lower than in conventionally built homes.

With the incorporation of **Standard Conditions SC-USS-4** through **SC-USS-7**, impacts from electricity and natural gas are considered less than significant level and no cumulative impacts will result.

Even though the Project will cause an unavoidable change in the demand for water and wastewater water utility systems, these various systems can be expanded to meet this increased demand and the facilities required to sustain these systems can be installed without causing an unavoidable significant adverse impact.

Implementation of the Project will result in the additional generation of construction and operational solid waste. Standard conditions address construction debris recycling and reuse to achieve a reduction in waste beyond the County requirement of a 50 percent reduction by weight. Implementation of this measure would reduce the construction waste from the Project at a higher level than required by the County. Therefore, no significant and unavoidable impacts are anticipated.

With adherence to and implementation of the above mitigation measures and those referenced in

Section 4.4, Air Quality, applicable General Plan Policies, SCE Programs, and applicable existing regulations, the proposed Project's potential electric and natural gas impacts can be controlled and will be reduced below a level of significance.

Energy

Energy usage is assumed to be cumulative. The proposed Project will result in an incremental use of energy during construction and operations. 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 conservations goals within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Project-related energy usage is not considered to be cumulatively considerable and would not result in a significant impact with the incorporation of **Mitigation Measure MM-GHG-1**.

Wildfire

Also according to the IS, the Project would have a less than significant impact such that it would impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan (see **Standard Condition SC-TR-2**), 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; 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; 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; or, expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (see **Standard Condition SC-HAZ-1** and **Standard Condition SC-PS-1**).

The proposed Project could result in significant impacts to the following environmental issues based on the facts, analysis and findings in this DEIR.

Air Quality

The Project area is designated as an extreme non-attainment area for ozone and a non- attainment area for Respirable Particulate Matter (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$).

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-GHG-1**, as well as **Mitigation Measure MM-AQ-1**, the proposed Project would not result in exceedances of regional air quality thresholds during construction. Therefore, the proposed Project construction-source air emissions would be considered a less than significant impact.

Mitigation Measure MM-GHG-1 shall be implemented to reduce operational source (VOC) emissions. 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. No feasible mitigation measures exist that would reduce this impact to less than significant levels.

Additionally, over 84 percent of the Project's nitrogen oxide (NO_x) emissions are derived from vehicle usage. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures beyond what is contained in **Mitigation Measure MM-GHG-1** that would reduce NO_x emissions to levels that are less than significant. Therefore, these emissions are considered significant and unavoidable.

Conflicts due to odors between the Project and the adjacent agricultural uses can be addressed through mitigation. Mitigation can be achieved by establishing a line of communication between the local farmers and future residents of the Project (see **Standard Condition SC-AG-1**, and **Mitigation Measure MM-AG-1**). These impacts are not considered cumulative in nature.

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-AQ-2**, as well as **Mitigation Measure MM-AQ-1**, construction of the proposed Project would not result in emissions that exceed applicable South Coast Air Quality Management District (SCAQMD) regional air quality thresholds. Project operational-source emissions would exceed applicable SCAQMD regional thresholds of significance for emissions (VOC and NO_x) during operation even after implementation of the recommended mitigation measures. All other criteria pollutants are below thresholds. Impacts will remain significant and unavoidable during operations.

Noise

Construction impacts will be less than significant. However, Best Management Practices, included as **Mitigation Measures MM-NOI-4** through **MM-NOI-8** and adherence to **Standard Condition SC-NOI-1** would further reduce noise levels produced by the construction equipment to the nearby sensitive residential land uses. These will not be cumulative impacts.

Mitigation Measure MM-NOI-1, requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable, and area cumulative impact.

To satisfy the 65 A-Weighted Decibel (dBA) Community Noise Equivalent Level (CNEL) exterior noise level standards for residential land use, **Mitigation Measure MM-NOI-2** shall be implemented. On-site impacts will be reduced to a less than significant level. There will be no cumulative impacts.

To satisfy the County's 45 dBA CNEL residential interior noise level standard, **Mitigation Measure MM-NOI-3** shall be implemented. Impacts will be reduced to a less than significant level. There will be no cumulative impacts.

Mitigation Measure MM-NOI-1 requires the use of rubberized asphalt for the following off-site

roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable.

Transportation

The proposed Project will contribute to the generation of additional traffic on local and regional roadways. The proposed Project is consistent with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable as well as cumulatively significant. In addition, the Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will also result in a significant cumulative impact.

The Executive Summary of potential Project impacts is presented in **Table 1-2, *Summary of Impacts and Mitigation Measures Discussed in this Draft EIR***, in Section 1.8.

1.6 ALTERNATIVES

CEQA and the State CEQA Guidelines require an evaluation of alternatives to the proposed action. Section 15126.6 of the State CEQA Guidelines indicates that the "discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of not significant...." The State Guidelines also state that "a range of reasonable alternatives to the Project which could feasibly attain the basic objectives of the project" and "The range of alternatives required in an EIR is governed by 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The detailed analyses of the alternatives evaluated are provided in Chapter 5, *Alternatives*, of this DEIR. This evaluation addresses those alternatives for feasibility and range of alternatives required to permit decision-makers a reasoned choice between the alternatives.

In this instance, the DEIR analysis in Chapter 4, *Environmental Impact Evaluation*, has reached a finding that three (3) unavoidable significant adverse effects (Air Quality, Noise, and Transportation) will result from implementing the Project as proposed in Chapter 3, Project Description.

No Project Alternative (NPA)

One of the alternatives that must be evaluated in an environmental impact report (EIR) is the No Project Alternative (NPA), regardless of whether it is a feasible alternative to the proposed Project,

i.e., would meet the project objectives or requirements. Under this alternative, the environmental impacts that would occur if the proposed Project is not approved and implemented are identified. The NPA assumes the property remains in its current state – vacant land.

Reduced Project Intensity Alternative (RPIA)

Under the Reduced Project Intensity Alternative (RPIA) the entirety of the Project would be developed at the low end of the density range for Medium Density Residential (2-5 dwelling units/acre) General Plan Land Use Designation. In total, 316 dwelling units would be allowed under the RPIA (158 acres x 2 dwelling units/acre). This is a decrease of 258 dwelling units on the Project site, when compared to the proposed Project.

Subsurface Drainage Alternative (SDA)

Under the Subsurface Drainage Alternative (SDA), all earthen channels utilized for the Project shall be undergrounded in concrete reinforced pipes. This would include the Residential Project site components, as well as the Off-site Project components. This alternative assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes.

Concrete Culvert Alternative (CCA)

Under the Concrete Culvert Alternative (CCA), all earthen channels utilized for the Project shall be contained within concrete culverts. This would include the Residential Project site components, as well as the Off-site Project components. This alternative assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes; however, it will have a slightly larger development footprint than the SDA.

Table 1-1, *Tabular Comparison of Project Alternatives*, lists the Project and the three (3) alternatives. The question of the Project or alterative resulting in a significant adverse impact is answered for the 18 resource issue areas analyzed in the Initial Study and Chapter 4, *Environmental Impact Analysis*, of this DEIR. A determination is made as to whether the Project, or alternatives meets the Project Objectives. Lastly, a determination I made as to which alternative is environmentally superior.

Table 1-1
TABULAR COMPARISON OF PROJECT ALTERNATIVES

	Would the Project/Alternative Result in Significant Adverse Impacts to the Resource Issues of …?					
	Proposed Project	**No Project Alternative (NPA)**	**Reduced Project Intensity Alternative (RPIA)**	**Subsurface Drainage Alternative (SDA)**	**Concrete Culvert Alternative (CCA)**	**Which Alternative is Environmentally Superior?**
Aesthetics	No	No (**L**)	No (**E**)	No (**L**)	No (**L**)	NPA
Agriculture and Forest Resources	No	No (**L**)	No (**E**)	No (**L**)	No (**L**)	NPA
Air Quality	**Yes**	No (**L**)	**Yes** (**L**)	**Yes** (**E**)	**Yes** (**E**)	NPA and RPIA
Biological Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Cultural Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Geology and Soils	No	No (**L**)	No (**L**)	No (**G**)	No (**G**)	NPA
Greenhouse Gas Emissions	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Hazards and Hazardous Materials	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Hydrology and Water Quality	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Land Use and Planning	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Mineral Resources	No	No (**E**)	No (**E**)	No (**E**)	No (**E**)	Alternatives are equal
Noise	**Yes**	No (**L**)	No (**L**)	**Yes** (**E**)	**Yes** (**E**)	NPA
Paleontological Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Population and Housing	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Public Services	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Recreation	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Transportation	**Yes**	No (**L**)	**Yes** (**E**)	**Yes** (**E**)	**Yes** (**E**)	NPA
Tribal Cultural Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Utilities and Service Systems	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Energy	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Wildfire	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Would Meet Project Objectives?	**Yes**	No	No	**Yes**	**Yes**	Proposed Project, SDA and CCA

Legend: **L** = Impact is less than the Project.
E = Impact is equal to the Project.
G = Impact is greater than the Project.

1.7 AREAS OF CONTROVERSY

A detailed discussion of all comments received on the Project in response to the Notice of Preparation is provided in Chapter 2, *Introduction*. Based on this input there no issues were identified as being controversial.

1.8 SUMMARY OF IMPACTS AND MITIGATION MEASURES DISCUSSED IN THIS DRAFT EIR

Table 1-2, *Summary of Impacts and Mitigation Measures Discussed in this Draft EIR*, provides a summary of all impacts and mitigation measures identified in the detailed environmental evaluation presented in Chapter 4, *Environmental Impact Evaluation*, of this DEIR as well as those dismissed in the Initial Study. This summary is meant to provide a quick reference to proposed Project impacts, but the reader is referenced to Chapter 4 and the Initial Study (provided in Chapter 8, *Appendices* of this DEIR) to understand the assumptions, method of impact analysis, and rationale for the findings and conclusions presented in **Table 1-2**. These impacts and mitigation measures do not relate to maintenance of flood control facilities; flood control facility maintenance will result in less than significant impacts and no mitigation is required other than **MM-BIO-1**, and **MM-BIO-2** which require doing pre-disturbance burrowing owl/nesting bird surveys.

It should be noted that subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. Therefore, while **Table 1-2** contains the evaluation from both the Initial Study and this DEIR, the Threshold/Issue Area numbering and text is slightly different than what was originally presented in the Initial Study.

Table 1-2
Summary of Impacts and Mitigation Measures Discussed in this Draft EIR

Impact Category	CEQA Threshold / Potential Impact	Mitigation Measures	Implementation Timing	Responsible Party	Impact with Mitigation
Aesthetics	1. Scenic Resources. a. Have a substantial effect upon a scenic highway corridor within which it is located. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	1. Scenic Resources. b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view. **There are no trees on the Project site. There are small, isolated rock outcroppings on the Project site. These will be removed as part of the Project development. Due to the number and size of these outcroppings, their removal will be considered less than significant. There are no unique, or landmark feature on the Project site. There are no scenic vistas within the area that will be affected by the Project. The Project will not result in the creation of an aesthetically offensive site open to public view, since future development would be similar in appearance. Impacts will be less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	1. Scenic Resources. 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	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality. **The Project site is surrounded by properties with Medium Density Residential General Plan Land Use Designations. These properties will ultimately be developed in a manner similar to the Project. Any impacts will be less than significant.**				
	2. Mt. Palomar Observatory. a. Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655. **Dismissed in Initial Study/ Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	3. Other Lighting Issues. a. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **Dismissed in Initial Study/ Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	3. Other Lighting Issues. b. Expose residential property to unacceptable light levels. **Dismissed in Initial Study/ Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Agriculture & Forest Resources	4. Agriculture. a. 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. **The Project will use land for non-agricultural uses. The existing General Plan Land Use**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	designations for the Project components are Medium Density Residential (MDR) and Estate Density Residential (EDR). Neither of these are agricultural General Plan Land use designations. The existing General Plan designations do not provide for agricultural use and no change to the existing General Plan designations is required to develop the proposed Project. Impacts will be less than significant.				
	4. Agriculture. b. Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve. **The Project proposes to change the site zoning classification from R-1 to R-4 (Planned Residential). Neither of these are an agricultural zoning classification. While the Project will conflict with the existing agricultural use, it will not conflict with any agricultural zoning.** **The Residential Project site is not located on land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve. No impacts will occur as it pertains to the Williamson Act contract or land within a Riverside County Agricultural Preserve.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not require*
	4. Agriculture. c. Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm"). **The Project will cause development of non-agricultural**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm"), the General Plan and General Plan EIR anticipated this conflict. Any impacts will less than significant level with adherence to Standard Condition SC-AG-1.				
	4. Agriculture. d. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. **The Project will convert those portions of the site planted in potatoes and cilantro to nonagricultural uses. Suburban, residential development on the Project site also has the potential to create conflicts with existing, adjacent agricultural uses. There may be pressure to convert adjacent, existing agricultural uses to a non-agricultural use primarily due to the odors and dust.**	**MM-AG-1** The Homeowner's Association (HOA) shall establish an agricultural interface committee and invite the adjacent farm owners/operators to be members of this committee. The purpose of this committee shall be to address/resolve the actual manifestation of conflicts between adjacent agricultural operations and urban uses, to foster trust between the farmers and the residents, and facilitate the education of urban residents and farmers. Project residents shall comply with the provisions in **SC-AG-1** in the event a potential conflict cannot be resolved.	First HOA Board Meeting	Homeowner's Association	Less Than Significant
	5. Forest. a. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g)). **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	5. Forest. b. Result in the loss of forest land or conversion of forest land to non-forest use. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	5. Forest. c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Air Quality	6. Air Quality Impacts. a. Conflict with or obstruct implementation of the applicable air quality plan. **The Project has the potential to result in or cause NAAQS or CAAQS violations. The proposed Project however, is consistent with the land use and growth intensities reflected in the adopted General Plan. Project operational-source emissions have the potential to exceed the applicable regional thresholds of significance. Therefore, the Project will conflict with the goal and objectives of the AQMP and have a potentially significant impact with respect to this threshold. Even with the incorporation of standard requirements and Mitigation Measures, impacts will be significant and unavoidable.**	**MM-AQ-1** During construction, the Project shall utilize "Super-Compliant" low VOC paints for the building envelope application which have been reformulated to exceed the regulatory VOC limits put forth by SCAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10g/L of VOC. Alternatively, the Project may utilize building materials that do not require the use of architectural coatings.	During construction	Contractor / County of Riverside Building Department	Significant and unavoidable
	6. Air Quality Impacts. 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. **During Phase 1, the Project has the potential to exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs. During Phase 2, the Project will exceed the**	**MM-AQ-1** and **MM-GHG-1** apply	See **MM-AQ-1** Prior to issuance of each building permit	See **MM-AQ-1** Project applicant / County of Riverside Building Department	Significant and unavoidable Significant and unavoidable

	thresholds of significance for emissions of VOCs and NO_x. **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. No feasible mitigation measures exist that would reduce this impact to less than significant levels.** **Over 84 percent 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 beyond what is contained in Mitigation Measure MM-GHG-1 that would reduce NO_x emissions to levels that are less than significant. Therefore, these emissions are considered significant and unavoidable.**				
	6. Air Quality Impacts. c. Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations. **Without mitigation, construction emissions would not exceed the LSTs for any criteria pollutants. According to LST methodology, LSTs would apply to the operational phase, if the Project includes stationary sources, or attracts mobile sources that may spend long periods queuing and**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	idling at the Project 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. **The Project site is currently vacant land that does not contain any operational land uses that emit toxic air contaminants. There are no health cancer and non-cancer risks associated with TACs. The proposed Project is a residential project and will not be a source of toxic air contaminants.** **The proposed Project would not produce the volume of traffic required to generate a CO "hot spot."**				
	6. Air Quality Impacts. d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **Potential odor sources associated with the operation of the Project are anticipated to be those that would be typical of any residential development. Residential developments typically do not result in odor impacts; therefore, this impact would be less than significant.** **The Project is subject to Assembly Bill 2881 – Right-to-Farm Disclosure, as discussed above. Mitigation can be achieved by providing disclosure to future residents that the Project site is located within 1 mile of farmland as designated on the most recent Important Farmland Map. In**	**MM-AG-1** applies	See **MM-AG-1**	See **MM-AG-1**	Less than significant

	addition, the Project is subject to Riverside County Ordinance No. 625 (Right-to-Farm Ordinance). This Ordinance requires prospective buyers of property adjacent to agricultural land to be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities. **Standard Condition SC-AG-1, as outlined in Section 4.4.5, requires disclosures as part of all home sales transaction(s).**				
Biological Resources	7. Wildlife & Vegetation. a. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan. **The Project area is within the MSHCP. The Project area is not located within or adjacent to a MSHCP Criteria Area; therefore, the Project area is not subject to special conservation requirements that apply to cells and is not required to undergo the HANS process. The Project is in compliance with MSHCP Sections 6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.3.2 and 6.4 through adherence to Standards Conditions SC-HYD-1, SC-HYD-2, SC-AES-2, SC-AES-3, SC-BIO-1 and SC-BIO-2, as well as implementation of Mitigation Measures MM-BIO-1 and MM-BIO-2.**	**MM-BIO-1** A 30-day preconstruction survey for burrowing owl is required by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) to confirm the continued presence of burrowing owl within the survey area. The survey shall be conducted by a qualified biologist no more than 30 days prior to ground disturbance in accordance with MSHCP survey requirements to avoid direct take of burrowing owl. If burrowing owl are determined to occupy the Project site or immediate vicinity, the County Environmental Programs Department will be notified, and avoidance measures will be implemented, as appropriate, pursuant to the MSHCP, the California Fish and Game Code, the MBTA, and the mitigation guidelines prepared by the CDFW (2012). The following measures are recommended in the CDFW guidelines to avoid impacts on an active burrow: • No disturbance should occur within 50 meters (approximately 160 feet) of occupied burrows during the non-breeding season. • No disturbance should occur within 75 meters (approximately 250 feet) of	30 days prior to ground disturbance	A qualified biologist / County Environmental Programs Department	Less than significant

		occupied burrows during the breeding season. For unavoidable impacts, passive or active relocation of burrowing owls would need to be implemented by a qualified biologist outside the breeding season, in accordance with procedures set by the MSHCP and in coordination with the CDFW. **MM-BIO-2** No grubbing, clearing, or grading shall occur during the general songbird and raptor nesting season, which is generally January 15 to August 31. All grading permits, improvement plans, and the final map shall state the same. If grubbing, clearing, or grading is proposed to occur during the general bird nesting season, a pre-construction survey within all suitable habitat shall be conducted by a qualified biologist to determine if active bird nests are present within the disturbance area. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within the disturbance area, clearing, grubbing, and grading shall be allowed to proceed. If active nests or nesting birds are observed within the disturbance area, the biologist shall delineate a buffer of 300 feet (500 feet for raptors) around each nest. Construction activities within the buffer shall not be permitted until nesting behavior has ceased, nests have failed, or young have fledged. The biological monitor may modify the buffer or propose other recommendations in order to minimize disturbance to nesting birds.	January 15 to August 31	Project contractors / County Building and Safety Department	Less than significant
	7. Wildlife & Vegetation. b. Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5)	**MM-BIO-1** and **MM-BIO-2** apply **MM-BIO-3** Prior to issuance of a grading permit for impacts to the agricultural ditch, the Project proponent shall obtain a Section	See **MM-BIO-1** and **MM-BIO-2** Prior to issuance of a grading permit for	See **MM-BIO-1** and **MM-BIO-2** Project proponent	Less than significant Less than significant

	or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12). The Project will impact the **smooth tarplant. Permanent loss of three individuals would not threaten regional population numbers and impacts to this species. Impacts will be less than significant.** **Of the remaining nine sensitive wildlife species, four species were determined to have a low potential to occur (western spadefoot toad, coastal whiptail, white-tailed kite, and western mastiff bat), two species were determined to have a moderate potential to occur (loggerhead shrike and San Diego black-tailed jackrabbit), and three species are presumed currently absent from the study area based on negative survey results (vernal pool fairy shrimp, Riverside fairy shrimp, and burrowing owl).** **Western spadefoot, coastal whiptail, white-tailed kite, loggerhead shrike, and San Diego black-tailed jackrabbit are fully covered species under the MSHCP. With payment of the MSHCP Local Development Mitigation Fee (LDMF), no additional mitigation is required for potential impacts to these species.** **Burrowing owl is considered a SSC and MSHCP conditionally covered species. Since the Project area supports suitable habitat for burrowing owl, focused surveys were conducted in accordance with the County's survey protocol. No burrowing owls or sign of burrowing owls were observed on**	1602 Stream Alteration Agreement from the CDFW. Compensatory mitigation for permanent impacts to CDFW jurisdiction shall be required as part of subsequent Section 1602 permitting requirements. Permanent impacts to CDFW jurisdiction shall be mitigated through on-site or off-site enhancement, restoration, and/or creation of CDFW jurisdictional streambed at ratio of no less than 2:1. The following minimization measures will be implemented during construction: 1. Use of standard Best Management Practices (BMPs) to minimize the impacts during construction. 2. Construction-related equipment will be stored in upland areas, outside of drainages except as required by Project design (restoration, trash removal, etc.). 3. Source control and treatment control BMPs will be implemented to minimize the potential contaminants that are generated during and after construction. Source control BMPs include landscape planning, roof runoff controls, trash storage areas, use of alternative building materials, and education of future tenants and residents. Treatment control BMPs include detention basins, vegetated swales (bio-swales), drain inlets, and vegetated buffers. Water quality BMPs will be implemented throughout the Project to capture and treat contaminants. 4. To avoid attracting predators during construction, the Project shall be kept clean of debris to the extent possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from site. 5. Employees shall strictly limit their activities, vehicles, equipment and construction material to the proposed Project footprint, staging areas, and designated routes of travel. Construction limits shall be fenced with	impacts to the agricultural ditch		

	the Project area during the 2017 or 2018 focused surveys. Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-2 will ensure that potential impacts to burrowing owls are reduced to less than significant levels. **Dry season fairy shrimp surveys were conducted within the agricultural ditch located in the northern portion of the Project site, as required by the County for the San Pedro Farms project located to the north of the Project site. The dry season surveys were negative for sensitive fairy shrimp species (Riverside fairy shrimp and vernal pool fairy shrimp). Since no sensitive fairy shrimp species were detected, no significant impacts will occur to sensitive fairy shrimp species as a result of the Project.** **The Project area does not support any vegetation communities or habitats considered sensitive by CDFW. Therefore, no impacts will occur.** **The Project will result in permanent impacts to approximately 0.14 acre of CDFW jurisdiction within the agricultural ditch. No temporary or permanent impacts are proposed to the roadside ditch.** **Impacts to CDFW jurisdiction will require a Section 1602 Stream Alteration Agreement from the CDFW, as described in Mitigation Measure MM-BIO-3. Compensatory mitigation for permanent impacts to CDFW jurisdiction will be required as part of subsequent Section 1602**	orange snow screen and exclusion fencing should be maintained until the completion of construction activities.			

	permitting requirements. With incorporation of Mitigation Measure MM-BIO-3, impacts will be reduced to a less than significant level. **Although 0.01 acre of USACE/RWQCB WUS was delineated within the roadside ditch, the Project will avoid permanent and temporary impacts to WUS. Impacts are proposed to the agricultural ditch; however, this feature does not support USACE/RWQCB jurisdiction based on lack of jurisdictional field indicators (e.g., OHWM). Therefore, no impacts to USACE/RWQCB WUS will occur from the Project.**				
	7. Wildlife & Vegetation. c. 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. Wildlife Service. **Please reference the discussion in Threshold 7.b. Through adherence to Standards Conditions SC-BIO-1 and SC-BIO-2, as well as implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, and MM-BIO-3 the Project will not 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**	**MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** apply	See **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**	See **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**	Less than significant

	Department of Fish and Game or U.S. Wildlife Service. Impacts will be reduced to a less than significant level.				
	7. Wildlife & Vegetation. d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites. **The Project area not part of a regional corridor and does not serve as a nursery site. The Project site is not identified by the MSHCP or South Coast Missing Linkages as being part of a local or regional corridor or linkage. The Project area has no direct connectivity to large blocks of habitat and is constrained by existing agricultural and development to the north, south, east, and west.** **Development of the proposed Project could disturb or destroy active migratory bird nests, including eggs and young. Disturbance to or destruction of migratory bird eggs, young, or adults is in violation of the Migratory Bird Treaty Act (MBTA) and is considered a potentially significant impact. Although suitable habitat for nesting birds on the Project area is limited, trees and herbaceous vegetation located within eucalyptus woodland and disturbed areas offer nesting habitat for protected nesting bird species. In addition, the agricultural field may support suitable habitat for ground nesting**	**MM-BIO-2** applies	See **MM-BIO-2**	See **MM-BIO-2**	Less than significant

	bird species. Mitigation Measure MM-BIO-2 will ensure Project compliance with MBTA regulations. With the incorporation of Mitigation Measure MM-BIO-2, the Project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts will be reduced to a less than significant level.				
	7. Wildlife & Vegetation. e. 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. **Please reference the discussion in Threshold 7.b. Through adherence to Standards Conditions SC-BIO-1 and SC-BIO-2, as well as implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, and MM-BIO-3 the Project will not 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. Impacts will be reduced to a less than significant level.**	**MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** apply	See **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**	See **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**	Less than significant
	7. Wildlife & Vegetation. f. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.)	**MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** apply	See **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**	See **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**	Less than significant

	through direct removal, filling, hydrological interruption, or other means. **Please reference the discussion in Threshold 7.b. Through adherence to Standards Conditions SC-BIO-1 and SC-BIO-2, as well as implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, and MM-BIO-3 the Project will not 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. Impacts will be reduced to a less than significant level.**				
	7. Wildlife & Vegetation. g. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Cultural Resources	8. Historic Resources. a. Alter or destroy an historic site. **No cultural resources of prehistoric or historic origin were observed within the boundaries of the Residential Project site or the Off-site Project components. Therefore, the Project will not alter or destroy an historic site. No impacts will occur.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	8. Historic Resources. b. Cause a substantial adverse change in the significance of a historical resource pursuant California Code of Regulations, Section 15064.5. **No cultural resources of prehistoric or historic origin were observed within the boundaries of**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Tentative Tract No. 37439 or the Off-site Project components. Based on this information, the proposed Project will not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. No impacts will occur.				
	9. Archaeological Resources. a. Alter or destroy an archaeological site. **Because the Project site has experienced severe ground disturbances in the past, any buried archaeological and/or cultural resources would have already been uncovered or destroyed. However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, Mitigation Measures MM-CUL-1 through MM-CUL-6 are provided to reduce the Project's potential to alter or destroy an archaeological site to a less than significant level.**	**MM-CUL-1** Conduct Paleontological Sensitivity Conduct Archaeological Sensitivity Training for Construction Personnel. The Applicant must retain a qualified professional archaeologist, approved by the Community Development Director, or designee, who meets U.S. Secretary of the Interior's Professional Qualifications and Standards, to conduct an Archaeological Sensitivity Training for construction personnel before commencing excavation activities. The training session must be carried out by a cultural-resources professional with expertise in archaeology, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The training session will include a handout and will focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of archaeological monitors, and, the general steps a qualified professional archaeologist would follow in conducting a salvage investigation if one is necessary.	Prior to any ground disturbance	Applicant	Less than significant
		MM-CUL-2 Unanticipated Resources. The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed: All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted	During ground-disturbing activities	Project Contractor / County Building and Safety Department	Less than significant

		and the applicant shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished. * A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other. ** If not already employed by the project developer, a County approved archaeologist shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary. **MM-CUL-3** Native American Monitor. Prior to the issuance of grading permits, the developer/permit applicant shall enter into an agreement with the consulting tribe(s) for a Native American Monitor. The Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native	During ground-disturbing activities	Applicant and qualified archaeological monitor	Less than significant

		American 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. The developer/permit applicant shall submit a fully executed copy of the agreement to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure. **MM-CUL-4** Project Archaeologist. Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program. A Cultural Resource Monitoring Plan shall be developed that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a wet-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the	Upon completion of monitoring services	Archaeological monitor	Less than significant

		presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Project Archaeologist. **MM-CUL-5** Artifact Disposition. Prior to Grading Permit Final Inspection, the landowner(s) shall relinquish ownership of all cultural resources that are unearthed on the Project property during any ground-disturbing activities, including previous investigations and/or Phase III data recovery. Historic Resources- all historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, 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 Prehistoric Resources- One of the following treatments shall be applied. a. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures to protect the reburial area from any future impacts. Reburial shall not occur until all required cataloguing, analysis and studies have been completed on the cultural resources, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial processes 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 County under a confidential cover and not subject to a Public Records Request. b. If reburial is not agreed upon by the Consulting Tribes then the resources shall be	Prior to Grading Permit Final Inspection	Landowner	Less than significant

		curated at a culturally appropriate manner at the Western Science Center, 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 County. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. **MM-CUL-6** Phase IV Cultural Report. Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures stipulated in the Cultural Resources Management Plan.	Prior to Grading Permit Final Inspection	Archaeological monitor	Less than significant
	9. Archaeological Resources. b. Cause a substantial adverse change in the significance of an	**MM-CUL-1** through **MM-CUL-4** apply	See **MM-CUL-1** through **MM-CUL-4**	See **MM-CUL-1** through **MM-CUL-4**	Less than significant

	archaeological resource pursuant to California Code of Regulations, Section 15064.5. **As stated in Threshold 9.a, above, because the Project site has experienced severe ground disturbances in the past, any buried archaeological and/or cultural resources would have already been uncovered or destroyed. However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, Mitigation Measures MM-CUL-1 through MM-CUL-6 are provided to reduce the Project's potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5 to a less than significant level.**				
	9. Archaeological Resources. c. Disturb any human remains, including those interred outside of formal cemeteries. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Geology and Soils	10. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones. a. Be subject to 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. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	11. Liquefaction Potential Zone. a. Be subject to seismic-related ground failure, including liquefaction.	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Dismissed in Initial Study/Less Than Significant Impact				
	12. Ground-shaking Zone. a. Be subject to strong seismic ground shaking. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	13. Landslide Risk. a. 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, collapse, or rockfall hazards. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	14. Ground Subsidence. a. 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 ground subsidence. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	15. Other Geologic Hazards. a. Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	16. Slopes. a. Change topography or ground surface relief features. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	16. Slopes. b. Create cut or fill slopes greater than 2:1 or higher than 10 feet. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	16. Slopes. c. Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	systems where sewers are not available for the disposal of waste water. **Dismissed in Initial Study/No Impact**				
	17. Soils. a. Result in substantial soil erosion or the loss of topsoil. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	17. Soils. b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	17. Soils. c. Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	18. Erosion. a. Result in substantial erosion or siltation on-site or off-site. **A site drainage plan is required by the County and will be reviewed by the Riverside County Building and Safety Department and/or RCFC&WCD. Erosion and siltation reduction measure BMPs contained in the required SWPPP will be implemented during construction. At the completion of construction, the Project will consist of impervious surfaces, landscaped planters, and post-construction BMPs. Standard Conditions SC-HYD-1 through SC-HYD-3 are required in order to ensure that the Project's potential**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	impacts to hydrology and water quality resources would remain less than significant. Standard Conditions SC-HYD-1 through SC-HYD-3 are not considered unique mitigation under CEQA.				
	19. Wind Erosion and Blowsand from Project either on- or off-site. a. Be impacted by or result in an increase in wind erosion and blowsand, either on- or offsite. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Greenhouse Gas Emissions	20. Greenhouse Gas Emissions. a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. **Construction emissions associated with Off-Site Project Components would occur as part of the Project. Channel, sewer line, and lift station improvements would occur outside of the Project boundary. Although a specific schedule of off-site utility and infrastructure improvements is unknown, the impacts associated with these expected activities are not expected to exceed the daily emission quantities identified for Project-related construction activities. As such, impacts associated with off-site utility improvements would be nominal. The *GHG Analysis* was conservative and anticipated operation of several pieces of equipment that would be operating at any given time period, during Off-site Project Components, the disturbance areas would be limited and less than what is evaluated for the Residential Project site.**	**MM-GHG-1** Prior to issuance of each building permit, the Project Applicant shall provide documentation to the County of Riverside Building Department demonstrating that the improvements and/or buildings subject to each building permit application include the following measures from the County of Riverside Climate Action Plan (November 2019) Greenhouse Gas Emissions Screening Tables (Appendix F to the Climate Action Plan), as needed to achieve the required 100 points. Alternatively, the specific measures may be substituted for other measures that achieve an equivalent amount of GHG reduction, subject to County of Riverside Building Department review: 1. Measure EE5.A.1 Insulation - Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) (9 points) 2. Measure EE5.A.2 Windows - Enhanced Window (0.32 U-factor, 0.25 SHGC) (4 points) 3. Measure EE5.A.3 Cool Roofs - Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) (7 points) 4. Measure EE5.A.4 Air Infiltration - Blower Door HERS Verified Envelope Leakage or equivalent (5 points) 5. Measure EE5.B.1 Heating/Cooling Distribution System - Modest Duct	Prior to issuance of each building permit	Project applicant	Less than significant

	Mitigation Measure GHG-1 has been included which specifies the measures to be provided by the Project to garner the 100 points. It should be noted that Mitigation Measure GHG-1 has been written in a manner to provide specific measures; however, it also allows flexibility to allow for changes that evolve as part of refinements to the CAP, or changes in technology. Regardless of the final methodology/measures, the Project shall garner the equivalent of 100 points. With the incorporation of Mitigation Measure GHG-1, the Project will not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts will be reduced to a less than significant level.	Insulation (R-6) (4 points) 6. Measure EE5.B.2 Space Heating/Cooling Equipment - Very High Efficiency HVAC (SEER 16/82% AFUE or 9 HSPF) (5 points) 7. Measure EE5.B.3 Water Heaters - Very High Efficiency Water Heater (0.92 Energy Factor) (11 points) 8. Measure EE5.B.5 Artificial Lighting - High Efficiency Lights (50% of in-unit fixtures are high efficiency) (6 points) 9. Measure EE5.B.6 Appliances - Energy Star Refrigerator (new) Energy Star Dishwasher (new) Energy Star Washing Machine (new) (3 points) 10. Measure CE1.A.1 Photovoltaic - 50 percent of the power needs of the Project (17 points) 11. Measure W2.A.2 Water Efficient Landscaping - Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use) (2 points) 12. Measure W2.B.1 Showers - Water Efficient Showerheads (2.0 gpm) (2 points) 13. Measure W2.B.2 Toilets - Water Efficient Toilets (1.5 gpm) (2 points) 14. Measure W2.B.3 Faucets - Water Efficient faucets (1.28 gpm) (2 points) 15. Measure W2.B.4 Dishwasher - Water Efficient Dishwasher (6 gallons per cycle or less) (1 points) 16. Measure W2.B.5 Washing Machine - Water Efficient Washing Machine (Water factor <5.5) (1 points) 17. Measure W2.B.6 WaterSense - EPA WaterSense Certification (7 points) 18. Measure T4.A.1 Electric Vehicle Recharging - Install electric vehicle charging stations for each residential unit included in the Project. Projects that include charging stations for fewer than all units shall receive points on a			

		proportional basis. (8 points) 19. Measure S1.A.1 Recycling - Provide green waste composting bins at each residential unit (4 points)			
	20. Greenhouse Gas Emissions. b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. **Please reference the discussion in Threshold 20.a, above.** **Mitigation Measure GHG-1 has been included which specifies the measures to be provided by the Project to garner the 100 points. It should be noted that Mitigation Measure GHG-1 has been written in a manner to provide specific measures; however, it also allows flexibility to allow for changes that evolve as part of refinements to the CAP, or changes in technology. Regardless of the final methodology/measures, the Project shall garner the equivalent of 100 points. With the incorporation of Mitigation Measure GHG-1, the Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts will be reduced to a less than significant level.**	**MM-GHG-1** applies	See **MM-GHG-1**	See **MM-GHG-1**	Less than significant
Hazards and Hazardous Materials	21. Hazards and Hazardous Materials. a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **Project construction would involve the routine use of hazardous materials, including fuels, paints, and solvents. However, the**	**MM-HAZ-1** Prior to grading permit final, and during construction, should an accidental release of a hazardous material occur, the following actions will be implemented: construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be notified; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material,	Prior to grading permit final, and during construction	Project contractor and Building and Safety Department	Less than significant

	amount of these materials during construction would be limited and regulated. Therefore, they would not be considered a significant environmental hazard. Implementation of BMPs would further reduce any impacts associated with hazardous materials during Project construction (see Standard Condition SC-HYD-1). **Project operational activities would involve the use of storage of household hazardous materials typical of residences. These uses would not present a significant hazard to the residents of the community or to the environment with regulatory compliance procedures in place (see Standard Condition SC-HYD-2).** **Mitigation Measure MM-HAZ-1 through Mitigation Measure MM-HAZ-4, are provided to reduce potential adverse hazards and hazardous material impacts related to accidental releases of hazardous materials during construction and operations, including known and unknown substances, and soils excavated from existing ponds.**	primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above sampling or remediation activities related to the contamination will be conducted under the oversight of Riverside County Site Cleanup Program. All of the above actions shall be documented and made available to the appropriate regulatory agencies prior to closure (a determination of the regulatory agency that the site has been remediated to a threshold that poses no hazard to humans) of the contaminated area. **MM-HAZ-2** During grading if an unknown contaminated area is exposed based on field observations by the contractor, soils engineer or County inspector, the following actions will be implemented: any contamination found during construction will be reported to the Riverside County Site Cleanup Program and all of the sampling or remediation related to the contamination will be conducted under the oversight of the Riverside County Site Program; construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be identified; a qualified professional (industrial hygienist or chemist) shall test the contamination and determine the type of material and define appropriate remediation strategies; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it	During grading	Project contractor and Building and Safety Department	Less than significant

		can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above actions shall be documented and made available to the appropriate regulatory agencies prior to closure of the contaminated area (a determination of the regulatory agency that the site has been remediated to a threshold that poses no hazard to humans). **MM-HAZ-3** Prior to issuance of occupancy permits, an information brochure shall be prepared and approved by the Riverside County Environmental Health Department and provided to all home purchasers prior to the close of escrow that informs all purchasers of homes within this development of the system for disposal of household hazardous wastes and the prohibition against disposal of such materials in the municipal solid waste collection system that serves the subdivision. This brochure shall also provide residents with an outline of a neighborhood plan to support self-sufficiency in an emergency. This will include how to establish a volunteer fire response team to support the local fire and emergency responders to manage small fires and identification of local residents with emergency response skills (medical personnel or individuals certified to perform first aid or CPR. **MM-HAZ-4** Soil excavated from the pond may only be used for non-residential fills, and shall not be used in residential fills. Prior to any ground disturbance, the Project applicant	Prior to issuance of occupancy permits Prior to any ground disturbance	Project developer and Riverside County Environmental Health Department Project applicant	Less than significant Less than significant

		shall test any soil excavated from the pond to determine if the excavated soils contain any analytes as metals, coliforms, Nitrogen, Phosphorus, etc. Should any remediation be required prior to relocation for fill, any work conducted shall be in compliance with guideline set by an oversight agency such as the County Department of Environmental Health Services (DEHS) or the Department of Toxic Substances Control (DTSC), prior to grading permit final.			
	21. Hazards and 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. **Please reference the discussion in Threshold 21.a, above. The Project will be required to adhere to South Coast Air Quality Management Rule 402, and Mitigation Measures MM-HAZ-1 through MM-HAZ-4. With adherence to South Coast Air Quality Management Rule 402, and Mitigation Measures MM-HAZ-1 through MM-HAZ-4, the Project will 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. Any impacts will be reduced to a less than significant level.**	**MM-HAZ-1** through **MM-HAZ-4** apply	See **MM-HAZ-1** through **MM-HAZ-4**	See **MM-HAZ-1** through **MM-HAZ-4**	Less than significant
	21. Hazards and Hazardous Materials. c. Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. **Dismissed in Initial Study/Less**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Than Significant Impact				
	21. Hazards and Hazardous Materials. d. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	21. Hazards and Hazardous Materials. e. 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. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	22. Airports. a. Result in an inconsistency with an Airport Master Plan. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	22. Airports. b. Require review by the Airport Land Use Commission. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	22. Airports. c. 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 for people residing or working in the Project area. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	22. Airports. d. For a project within the vicinity of a private airstrip, or heliport, would the	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Project result in a safety hazard for people residing or working in the Project area. **Dismissed in Initial Study/No Impact**				
Hydrology and Water Quality Resources	24. Water Quality Impacts. a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **The Project requires the preparation of a SWPPP for control of pollutants during construction and a WQMP for control of pollutants during occupancy of the Project site. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements. The protection of water quality and future runoff volumes will be accomplished by reducing, to the extent feasible, the amount of impervious surface and through on-site retention. All wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant. Standard Condition SC-HYD-4 is required in order to ensure that the Project's potential impacts to water quality resources (waste discharge requirements) would remain less than significant. Therefore, the Project will not violate any water quality standards**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts are less than significant.				
	24. Water Quality Impacts. b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **The *Geo Evaluation* noted that no groundwater was encountered in any of the test pits that were excavated at the site to a maximum depth of 9 feet below existing grade or the borings that were excavated to 21 feet below existing grade. No groundwater was encountered by previous consultants in borings excavated to 50 feet below existing grade. Project-related grading will not reach these depths and no disturbance of groundwater is anticipated. The proposed single-family residential building footprints, roadways and other hardscape will increase on-site impervious surface coverage thereby reducing the total amount of infiltration on-site. The Project site will construct the proposed Holland Channel (designated as Line A through the Project site) and Line B. The Holland Channel will be constructed from Eucalyptus Avenue to the existing culvert at Southshore Drive. This system will be a combination of box culverts and open channels that will be engineered, earthen channels with a low flow concrete channel. The drainage system will**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	be maintained by RCFC&WCD. The open channels will allow for groundwater recharge. The Project will not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts will be less than significant.				
	24. Water Quality Impacts. 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. **There are no identified streams or rivers on the Project site. The proposed Project will utilize bioretention basins to treat for water quality purposes. The required water quality volume was determined by using the Santa Ana Watershed Best Management Practices Design Volume Spreadsheets. The effective impervious fraction was calculated based upon the tributary land use designations. A site drainage plan is required by the County and will be reviewed by the Riverside County Building and Safety Department and/or RCFC&WCD. At the completion of construction, the Project will consist of impervious surfaces, landscaped planters, and post-construction BMPs. Standard Conditions SC-HYD-1 through SC-HYD-3 are required in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. Therefore, the Project**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	will not 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. Impacts will be less than significant.				
	24. Water Quality Impacts. d. Result in substantial erosion or siltation on-site or off-site. **A site drainage plan is required by the County and will be reviewed by the Riverside County Building and Safety Department and/or RCFC&WCD. Erosion and siltation reduction measure BMPs contained in the required SWPPP will be implemented during construction. At the completion of construction, the Project will consist of impervious surfaces, landscaped planters, and post-construction BMPs. Standard Conditions SC-HYD-1 through SC-HYD-3 are required in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. Therefore, the Project will not result in substantial erosion or siltation on-site or off-site. Impacts will be less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	24. Water Quality Impacts. e. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site. **Water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	(NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as Standard Conditions SC-HYD-1 through Standard Condition SC-HYD-3. The Project contains drainage improvements that will serve to facilitate local and regional drainage. The Project will result in improvements that will benefit an area that is currently deficient in these facilities. aside from the accumulations of water in the future detention basins, the proposed Project is not forecast to substantially change the amount of surface water in any water body, including during future storms up to the 100-year runoff volume. Therefore, the Project will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site. Impacts will be less than significant.				
	24. Water Quality Impacts. f. 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. **Consistent with the discussion in Thresholds 24.a, and 24.c, potentially significant impacts could occur if development of the project results in runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. With site design features which incorporate measures to control surface**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	runoff, and the incorporation of Standard Conditions SC-HYD-1 through SC-HYD-4, Project's potential impacts to hydrology and water quality resources (which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff) would remain less than significant.				
	24. Water Quality Impacts. g. Impede or redirect flood flows. **The proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard. All runoff from the future developed site will be managed including future storms up to the 100-year storm. Based on these findings, the proposed Project can be implemented without exposing the Project to a significant flood hazard using the 100-year criterion. Therefore, the proposed Project will not impede or redirect flood flows in a manner that would result in significant adverse impacts to the environment. Impacts will be less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	24. Water Quality Impacts. h. In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation. **The proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard. All runoff from the future developed site will be managed including future storms up to the 100-year storm. Based on these findings, the proposed Project can be implemented**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	without exposing the Project to a significant flood hazard using the 100-year criterion. Therefore, the proposed Project will not impede or redirect flood flows in a manner that would result in significant adverse impacts to the environment. Impacts will be less than significant. Tsunamis do not pose hazards due to the inland location of the Project site. According to the Safety Element, the Project site is not located in a special flood hazard area, therefore seiches do not pose a hazard to the Project site. The Project site is located in a dam inundation area for the Diamond Valley Lake. The General Plan includes Safety Policies 4.1, 4.12, 4.17 and 4.18, to reduce or minimize the effects of prospective growth from dam inundation hazards. Implementation of these proposed General Plan policies related to dam inundation hazards would reduce the effects of growth and development to ensure that future development (including the Project) in Riverside County would not have any significant adverse impacts from dam inundation hazards. Please reference the discussion in Thresholds 24.a, and 24.c, and 24.f, as they pertain to treatment of polluted runoff. With site design features which incorporate measures to control surface runoff, and the incorporation of Standard Conditions SC-HYD-1 through SC-HYD-4, Project's potential impacts to hydrology and water quality resources (which would exceed				

	the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff) would remain less than significant.				
	24. Water Quality Impacts. i. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **Please reference the discussions in Thresholds 24.a, 24.b, 24.c, and 24.f. Standard Conditions SC-HYD-1 through SC-HYD-3 are required in order to ensure that the Project's potential impacts to hydrology and water quality resources, including a water quality control plan and/or sustainable groundwater management plan, would remain less than significant. The Project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Any impacts are considered less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Land Use and Planning	26. Land Use. a. 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. **There are residential and agricultural zoning classifications on the adjacent and surrounding properties. The Residential Project Components will be consistent with the surrounding residential zoning. The proposed change from R-1 to R-4 allows for flexibility in the zoning standards. The Residential Project components**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	are consistent with the General Plan Land Use Designation of CD:MDR. The Off-site Project components will not conflict with the existing surrounding zoning. **The Project is located within both the *HVWAP* and the *SCMVAP*. In addition, it is also located within the Highway 79 Policy Area and Estate Density Residential & Rural Residential Policy Area. Lastly, the Project will be subject to the Countywide Design Standards & Guidelines (Guidelines). There is no applicable specific plan.** **The Project site is located within the Highway 79 Policy Area of the Harvest Valley/Winchester Area Plan. This Policy Area has been implemented to address transportation infrastructure timing as it relates to development projects. The Highway 79 Policy Area contains Policies relevant to the Project that duplicate *SCMVAP* 1.1, 2.3, and 5.1.** **As discussed in Subchapter 4.15 (Transportation) of the DEIR:** **"*The proposed Project is with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see Standard Condition SC-TR-1) and DIF (see Standard Condition SC-TR-3). The Project will be required to implement Mitigation Measure MM-TR-1 and Mitigation Measure MM-TR-2 to address the Project the Existing Plus Ambient plus Project plus Cumulative (EAPC)***				

	***for the EPAC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) Project scenarios. With incorporation of Mitigation Measure MM-TR-1 and Mitigation Measure MM-TR-2, Project cumulative impacts will be reduced to a less than significant level.*"** **The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see Standard Conditions SC-AES-1, SC-AES-4, and SC-AES-5). The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential.** **Given that the proposed Project was anticipated under the existing General Plan land use designation, the proposed land uses would intensify the development and associated population projections planned for under the General Plan. Therefore, the Project would not conflict with and exceed the assumptions used to develop the RTP/SCS. Project consistency with the RTP/SCS demonstrates that Project impacts will be considered less than significant impact.**				
	26. Land Use. b. Disrupt or divide the physical	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	arrangement of an established community (including a low income or minority community). **Please reference the discussion in Threshold 26.a. The Project will represent a change to a rural area that will result in a suburban form of development. This form of development is anticipated in the General Plan for the Project site and the environs surrounding the Project site. Roadways (Leon Road, Briggs Road, Holland Road and Eucalyptus Road) will be improved to General Plan standards and will contribute to the planned development of the Project area. The same conclusions can be drawn from the water, sewer, and drainage improvements. None of these improvements would be considered any type of barrier or disruption to the area.** **Therefore, the Project would not disrupt or divide the physical arrangement of an established community (agricultural, vacant, or large lot single-family residential); however, this impact will be less than significant.**				
Mineral Resources	28. Mineral Resources. a. Result in the loss of availability of a known mineral resource in an area classified or designated by the State that would be of value to the region or the residents of the State. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	28. Mineral Resources. b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	land use plan. **Dismissed in Initial Study/No Impact**				
	28. Mineral Resources. c. Expose people or property to hazards from proposed, existing or abandoned quarries or mines. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Noise	29. Airport Noise. a. 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 expose people residing or working in the Project area to excessive noise levels. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	29. Airport Noise. b. For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	33. Noise Effects by the Project. 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, noise ordinance, or applicable standards of other agencies. **Construction impacts will be less than significant. However, Best Management Practices, included as Mitigation Measures MM-NOI-4 through MM-NOI-8 and adherence to Standard Condition SC-NOI-1 would further reduce noise levels produced by the construction**	**MM-NOI-1** Rubberized asphalt overlays into off-site roadway improvements shall be implemented to reduce impacts to the following off-site roadway segments: • Leon Road south of Craig Avenue (Segment #6); • Leon Road south of Garbani Road (Segment #7); • Holland Road west of Leon Road (Segment #12). Street improvement plans shall be submitted to the County Transportation Department for review and approval, which contain the specifications necessary to reduce traffic noise level increases from automobile traffic	Road improvement plan submittal	County Building and Safety and Transportation Departments	Significant and unavoidable

	equipment to the nearby sensitive residential land uses. **Mitigation Measure MM-NOI-1, requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of Mitigation Measure MM-NOI-1, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable, and area cumulative impact.** **To satisfy the 65 dBA CNEL exterior noise level standards for residential land use, Mitigation Measure MM-NOI-2 shall be implemented. Impacts will be reduced to a less than significant level.** **To satisfy the County's 45 dBA CNEL residential interior noise level standard, Mitigation Measure MM-NOI-3 shall be implemented. Impacts will be reduced to a less than significant level.**	by roughly 4 dBA to uses adjacent to the above referenced off-site roadway segments. All street improvements shall be installed consistent with approved plans. **MM-NOI-2** Prior to building permit issuance, wall plans shall be submitted to the Building and Department for review and approval. Said wall plans shall incorporate the following noise barriers, consistent with Figure 4.12-5, Summary of Recommendations of Subchapter 4.12 of the Draft EIR: • 8-foot high noise barriers for outdoor living areas (backyards) of lots 31 to 50, 136 to 149,151 to 153, and 334 to 340 adjacent to Leon Road and Holland Road; and • 6-foot high noise barriers for outdoor living areas (backyards) of lots 7 to 30, 154, 157 to 162, 287 to 296, 347 to 360, 464 to 472, and 558 to 574 adjacent to Eucalyptus Road and Craig Avenue. **MM-NOI-3** Prior to building permit issuance, building construction documents shall be submitted to the Building and Safety Department for review and approval. Said wall plans shall incorporate the following design components, consistent with Figure 4.12-5, *Summary of Recommendations* of Subchapter 4.12 of the Draft EIR: <u>Windows/Sliding Glass Doors</u>: All residential units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and comply with the following sound transmission class (STC) ratings: o Upgraded windows and sliding glass doors with minimum STC ratings of 32 are required for all windows/glass doors facing Leon Road and Holland Road in lots 31 to 50, 136 to 149,151 to 153, and 334 to 340; o All other residential lots require	Prior to building permit issuance Prior to building permit issuance	Project contractor/ Building and Safety Project contractor/ Building and Safety Department	Significant and unavoidable Significant and unavoidable

		windows/glass doors with minimum sound transmission class (STC) ratings of 27. Exterior Doors (Non-Glass): All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27. Exterior Walls: 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: 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. Ventilation: Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. 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.			
		MM-NOI-4 Large loaded trucks and mobile equipment (greater than or equal to 80,000 pounds) shall not be used within 85 feet of land uses represented by receiver location OR2 if occupied at the time of Project construction, as shown on Figure 4.12-6, Construction Activity and Receiver Locations of Subchapter 4.12 of the Draft EIR. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used by the Project contractor within this area during Project construction to reduce vibration effects.	During grading	Project contractor/ Building and Safety Department Project contractor/ Building and	Less than significant

				Safety Department	
		MM-NOI-5 Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May (County of Riverside Ordinance No. 847). The Project construction supervisor shall ensure compliance with the note and the County shall conduct periodic inspection at its discretion.	Prior to approval of grading plans and/or issuance of building permits	Project contractor/ Building and Safety Department	Less than significant
		MM-NOI-6 During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.	During all Project site construction	Project contractor/ Building and Safety Department	Less than significant
		MM-NOI-7 During all Project site construction, The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., to the center).	During all Project site construction	Project contractor/ Building and Safety Department	Less than significant
		MM-NOI-8 During all Project site construction, the construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May). The contractor shall design delivery routes to	During all Project site construction		Less than significant

		minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.			
	33. Noise Effects by the Project. b. Generation of excessive ground-borne vibration or ground-borne noise levels. **Mitigation Measures MM-NOI-4 through MM-NOI-8 and Standard Condition SC-NOI-1 shall be implemented to reduce construction vibration levels produced by the construction equipment to the nearby sensitive land uses. In addition, the Best Management Practices, included as Mitigation Measures MM-NOI-4 through MM-NOI-8 and Standard Condition SC-NOI-1 would further reduce noise and vibration levels produced by the construction equipment to the nearby sensitive residential land uses. With implementation of Mitigation Measures MM-NOI-4 through MM-NOI-8 and Standard Condition SC-NOI-1, the Project-related vibration impacts at the nearby receiver locations represents a less than significant impact during the worst-case construction activities.**	**MM-NOI-4** through **MM-NOI-8** apply	See **MM-NOI-4** through **MM-NOI-8**	See **MM-NOI-4** through **MM-NOI-8**	Less than significant
Paleontological Resources	34. Paleontological Resources a. Directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Population and Housing	35. Housing. a. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Dismissed in Initial Study/No Impact				
	35. Housing. b. Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	35. Housing. f. 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). **The Project is consistent with the range of Medium Density Residential. Therefore, the Project is not proposing a significant intensification of population and housing over the current General Plan projections. Any impacts would be less than significant.** **New infrastructure will be built as part of this Project which will contribute to extending improved services into the area.** **The proposed infrastructure improvements have the potential to facilitate development undeveloped parcels in the immediate vicinity of the site, thus the Project may indirectly induce population growth.** **The Project will install off-site flood control facilities, including MDP/ADP improvements, which will remove drainage limitations that currently exist for property surrounding the Project site.** **The MDP/ADP improvements to be**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	constructed by the Project have been sized to meet regional drainage demands. The installation of the MDP/ADP improvements by the Project will remove drainage limitations that currently exist for properties in the Project area, and will result in an increase in population that is anticipated in the General Plan. Direct impacts from the homes developed by the Project will be less than significant. **The indirect effects from the Project infrastructure extensions and improvements (roadways, sewer and drainage), while anticipated under the General Plan, will be less than significant.** **No businesses are proposed; therefore, there will be no direct or indirect impact.**				
Public Services	PUBLIC SERVICES. 36. Fire Services. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	PUBLIC SERVICES. 37. Sheriff Services. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	PUBLIC SERVICES. 38. Schools. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	PUBLIC SERVICES. 39. Libraries. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	PUBLIC SERVICES. 40. Health Services. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Recreation	41. Parks and Recreation. a. Include recreational facilities or	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **The Project is required, by County Ordinance No. 460, to dedicate five acres of parkland per 1,000 new residents or pay an in-lieu fee instead of dedicating parkland. This Project is proposing to develop parkland. The new residents resulting from the buildout of the proposed Project would create demand for 8.79 acres of new parkland.** **With adherence to Standard Conditions SC-REC-1 and SC-REC-2, and adherence to the maintenance responsibilities defined in Table 4.14-3 and depicted on Figure 4.14-11, any impacts from the Project's recreational facilities which might have an adverse physical effect on the environment** will be less than significant.				
	41. Parks and Recreation. b. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **As discussed in Threshold 41.a, above, the Project will develop new community park, trail and bicycle lane facilities to serve Project residents and members of the public. The Project will satisfy Ordinance No. 460 by dedicating and developing an 8.96-acre community park to provide for the recreational needs of the 1,757 residents gathered at the**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Residential Project site and members of the public. **The Project will also develop (i) that portion of the Regional Trail located on the Holland Road and Eucalyptus Road Project frontages, as required by the HVWAP, (ii) multi-purpose trails on either side of the Line A drainage channel, and (iii) Class II bicycle lanes on the Craig Avenue and Leon Road Project frontages.** **In addition, the Project will pay DIF fees as required by Ordinance No. 659. These recreational facilities will serve the needs of residents and members of the pubic within the Residential Project area eliminating the need for Project residents to look outside the Project site for recreational facilities and multi-purpose trails. The development of these on-site recreational facilities is expected to satisfy the needs of Project residents eliminating their need to use other neighborhood/regional parks or recreational facilities to the extent that a substantial physical deterioration of the facility would occur or be accelerated.** **With the new community park dedication, construction of the portion of the Regional Trail, the multi-purpose trails and the Class II bicycle lanes, impacts to regional parks outside the Project site will be less than significant.** **The development and operation of the proposed recreational facilities, along with the entirety of the proposed Project, would require grading and development**				

	activities that would or would have the potential to contribute to physical impacts evaluated in other subchapters of this DEIR which include: aesthetics, agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, and noise.				
	41. Parks and Recreation. c. Is the Project located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees). **Please reference the discussion in Thresholds 41.a, and 41.b, above.** **To mitigate any Project impacts caused by the 1,757 new residents, the Project will dedicate and construct an 8.96-acre community park as required by Ordinance No. 460 (Standard Condition SC-REC-1).** **The Project will also pay Development Impact Fees per Ordinance No. 659 (Standard Condition SC-REC-2).** **These are standard conditions and are not considered unique mitigation under CEQA. With adherence to Standard Conditions SC-REC-1 and SC-REC-2, any impacts will be less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	42. Recreational Trails. Would the Project include the construction or expansion of a trail system. **See the discussion in 41.a, above. The Project will construct that portion of the Regional Trail along the Project frontages on Holland Road and Eucalyptus Road. The Regional Trail may also be used as a bike path.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	The Project will also install Class II bicycle lanes on the Craig Avenue and Leon Road Project frontages, as well as multi-use trails for walking, bicycle riding, and maintenance vehicles on both sides of the Line A drainage channel. **In addition, the Project will pay DIF fees as required by Ordinance No. 659.** **The portion of the Regional Trail within the Residential Project area, the multi-use trails along the drainage channel, and the Class II bicycle lanes will serve the needs of Project residents and members of the pubic consistent with the requirements of Ordinance No. 460. These on-site trails and bicycle lanes are expected to satisfy the needs of Project residents such that they will not need to use other trails or bicycle lane facilities. With construction of the portion of the Regional Trail and the walking trails with the Project, impacts due to the construction or expansion of a trail will be less than significant.**				
Transportation	43. Transportation. a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. **With the incorporation of Standard Conditions SC-TR-1, SC-TR-2, and SC-PS-1, and Mitigation Measures MM-TR-1 through MM-TR-5, the Project's direct impacts to Leon Road & Scott Road, Haun Road/Zeiders Road & Scott Road, as Project direct contributions to**	**MM-TR-1** Phase 1 - Leon Road & Scott Road (#13) – Prior to the 1st certificate of occupancy, the applicant shall install the following improvements: • Traffic Signal • Northbound left turn lane • Southbound left turn lane • Eastbound left turn lane • Westbound left turn lane **MM-TR-2** Phase 2 - Haun Road/Zeiders Road & Scott Road (#1) – Prior to the 1st certificate of occupancy, the applicant shall	Prior to the 1st certificate of occupancy Prior to the 1st certificate of occupancy	Applicant Applicant	Significant and unavoidable impact Significant and

	the cumulative scenarios will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Any impacts will be reduced to a less than significant level. The Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will result in a significant cumulative impact.	install the following improvements: • Construct a 2nd southbound left turn lane. • Modify the traffic signal to implement overlap phasing on the westbound right turn lane. It should be noted that these improvements have been conditioned on other near-by development and are to be constructed by others. **MM-TR-3** Phase 2 - Leon Road & Scott Road (#13) – Prior to the 1st certificate of occupancy, the applicant shall install the following improvements: • Traffic Signal • Northbound left turn lane • Southbound left turn lane • Eastbound left turn lane • Westbound left turn lane • Overlap phasing on Southbound right turn lane • 2nd Eastbound through lane • 2nd Westbound through lane **MM-TR-4** Prior to the issuance of building permits, the Project applicant shall participate in the County's TUMF/DIF programs by paying the requisite TUMF/DIF fees at the time of building permit; and in addition, shall pay the Project's fair share amount of $314,011 for the improvements identified in Table 1-6 Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis Report County of Riverside, dated June 5, 2018, prepared by Urban Crossroads (TIA) that are consistent with the improvements shown on Table 7-5 of the TIA, or as agreed to by the County and Project Applicant. **MM-TR-5** Table 1-6 of the TIA includes intersections that either share a mutual	Prior to the 1st certificate of occupancy Prior to the issuance of building permits	Applicant Applicant	unavoidable impact Significant and unavoidable impact Significant and unavoidable impact

		border with the City of Menifee or are wholly located within the City of Menifee that have recommended improvements which are not covered by DIF. Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Developer's fair-share amount for the intersections that either share a mutual border with the City of Menifee or are wholly located within the City of Menifee that have recommended improvements for Phase Project Buildout 2025 which are not covered by TUMF/DIF equals $87,537. Developer shall be required to pay this $87,537 amount to either the County of Riverside or City of Menifee prior to the issuance of the Project's final certificate of occupancy.	Prior to the issuance of the Project's final certificate of occupancy	Developer	Significant and unavoidable impact
	43. Transportation. b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. **With the incorporation of Standard Conditions SC-TR-1, SC-TR-2, and SC-PS-1, and Mitigation Measures MM-TR-1 through MM-TR-5, the Project's direct impacts to Leon Road & Scott Road, Haun Road/Zeiders Road & Scott Road, as Project direct contributions to the cumulative scenarios will not conflict with a program, plan, ordinance, or policy addressing**	**MM-TR-1** through **MM-TR-5** apply	See **MM-TR-1** through **MM-TR-5**	See **MM-TR-1** through **MM-TR-5**	Significant and unavoidable impact

	the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Any impacts will be reduced to a less than significant level. The Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will result in a significant cumulative impact.				
	43. Transportation. c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	43. Transportation. d. Cause an effect upon, or a need for new or altered maintenance of roads. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	43. Transportation. e. Cause an effect upon circulation during the project's construction. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	43. Transportation. f. Result in inadequate emergency access or access to nearby uses. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	44. Bike Trails.	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not*

	a. Include the construction or expansion of a bike system or bike lanes. **Class II bicycle lanes will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic. Therefore, the Project will not conflict with bike lanes. Impacts will be less than significant.**				*required*
Tribal Cultural Resources	45. Tribal Cultural Resources a. Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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 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). **No tribal cultural resources were identified by any of the consulting tribes. Consultation, pursuant to AB52 has been completed. However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, Standard Condition SC-CUL-1 and Mitigation Measures MM-CUL-1 through MM-CUL-6 (see Section 4.16.5), will be implemented. With**	**MM-CUL-1** through **MM-CUL-6** apply	See **MM-CUL-1** through **MM-CUL-6**	See **MM-CUL-1** through **MM-CUL-6**	Less than significant

	Standard Condition SC-CUL-1 and Mitigation Measures MM-CUL-1 through MM-CUL-6, impacts to tribal cultural resources will remain less than significant.				
	45. Tribal Cultural Resources b. Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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 a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in 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 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe. **Please reference the discussion under Threshold 45.a; impacts to tribal cultural resources will remain less than significant.**	**MM-CUL-1** through **MM-CUL-6** apply	See **MM-CUL-1** through **MM-CUL-6**	See **MM-CUL-1** through **MM-CUL-6**	Less than significant
Utilities and Service Systems	46. Water. a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects **According to the *WSA*, EMWD has determined that it will be able to provide adequate water supplies to meet the potable water demand for**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	the Project as part of its existing and future demands. According to the Will Serve letter, EMWD is willing to provide water service to the Project. The provision of service is contingent upon the necessary arrangements in accordance with EMWD rules and regulation. Further arrangements for service from EMWD nay also include plan check, facility construction, inspection, jurisdictional annexation and payment of financial participation fees. Consistent with the discussion in Thresholds 24.a, and 24.b, in Subchapter 4.10, potentially significant impacts could occur if development of the project results in runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. With site design features which incorporate measures to control surface runoff, and the incorporation of Standard Conditions SC-HYD-1 through SC-HYD-4, Project's potential impacts to hydrology and water quality resources (which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff) would remain less than significant. The Project will not require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause				

	significant environmental effects. Any impacts will be less than significant.				
	46. Water. b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years **Based on the information contained in the WSA, EMWD has determined that it will be able to provide adequate water supplies to meet the potable water demand for the Project as part of its existing and future demands. Therefore, the Project sufficient water supplies are available to serve the Project from existing entitlements and resources. Impacts will be less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	47. Sewer. a. Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects. **All wastewater generated by the interior plumbing system of the proposed Project will be discharged into the local sewer system and conveyed for treatment at the Perris Valley RWRF. Wastewater flows will consist of typical residential wastewater discharges and will not require new methods or equipment for treatment that are not currently permitted for the facility. Connections to local sewer mains will involve temporary and less than significant construction**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	impacts that will occur in conjunction with other on-site improvements. It should be noted that no septic systems are proposed. All wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant. Standard Condition SC-HYD-4 is required in order to ensure that the Project's potential impacts to water quality resources (waste discharge requirements) would remain less than significant. The proposed Project will be subject to sewer connection fees. The purpose of these fees is to pay for existing and future sewer capacity. Standard Condition SC-USS-3 shall be implemented to address these fees. According to the Will Serve letter, EMWD is willing to provide sewer service to the Project. Any impacts will be less than significant.				
	47. Sewer. b. Result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. **Please reference the discussion in Threshold 47.a. Given the existing capacity within the EMWD facilities, Project design, and adherence to Standard Condition SC-HYD-4, and Standard Condition SC-USS-3, any impacts are considered less than significant.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	48. Solid Waste.	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not*

	a. 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. **Dismissed in Initial Study/Less Than Significant Impact**				*required*
	48. Solid Waste. b. Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan). **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	49. Utilities. a. Electricity. **The Project would increase use of electricity within SCE's service area, particularly the demand for electricity to light, heat, and air condition the residential development. SCE currently is in the process of upgrading the electrical infrastructure that serves the greater Project area. The infrastructure project is designed to provide sufficient electrical capacity and reliability for existing and planned development in the area. SCE is aware that there are currently planned, or in process, additional developments in the Project area which will require power. As development of the Project and/or surrounding developments occurs, even more circuits may be necessary. Overall electrical consumption will increase as a result of the proposed Project and cumulative development in the general vicinity. SCE has established that**	**MM-GHG-1** applies	See **MM-GHG-1**	See **MM-GHG-1**	Less than significant

	additional transmission capacity will be necessary to provide the power and power grid necessary to support future growth in the Project vicinity. SCE is expanding transmission capacity in the general Project area, and the potential impacts associated with construction of transmission facilities has been or will be evaluated under CEQA by SCE. Sufficient power and distribution capabilities exist or are expected to exist to provide the proposed Project with adequate electrical service.				
	49. Utilities. b. Natural gas. **New gas main extensions will be required to serve the proposed Project. All new distribution lines will be constructed concurrently with Project development by phase. Thus, construction of new and replacement gas lines needed on site is addressed in the analyses of construction impacts throughout the DEIR. Therefore, impacts to the surrounding environment from the construction of on-site natural gas facilities are considered to be less than significant. Since no natural gas is presently utilized onsite, there will be no interruption of existing gas service to the Project site. However, some interruption could occur offsite. This could be a significant adverse impact if existing lines do not remain operable while replacement lines are being constructed or connected to the adjacent gas mains. The implementation of**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Standard Condition SC-USS-7 will ensure that all gas service remains available to existing users while new and replacement lines are under construction and reduce these potential temporary impacts to less than significant levels.				
	49. Utilities. Communications systems. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	49. Utilities. c. Street lighting. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	49. Utilities. d. Maintenance of public facilities, including roads. **Dismissed in Initial Study/Less Than Significant Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
	49. Utilities. e. Other governmental services. **Dismissed in Initial Study/No Impact**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*
Energy	Energy. a. Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation. **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**	**MM-GHG-1** applies	See **MM-GHG-1**	See **MM-GHG-1**	Less than significant

	engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of Mitigation Measure MM-GHG-1.				
	Energy. b. Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency. **As discussed in Threshold 4.18.a, 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 recreational and residential 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. Further, the Project would not cause or result in the need for additional energy producing facilities or energy delivery systems. Any impacts would be reduced to a less than significant level with the incorporation of Mitigation Measure MM-GHG-1.**	**MM-GHG-1** applies	See **MM-GHG-1**	See **MM-GHG-1**	Less than significant
Wildfire	Wildfire a. If located in or near a State Responsibility Area ("SRA"), lands	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan. **The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area." The Project will take access from existing roadways, and roadways that will be improved. These roadways will connect into part of an adopted emergency response plan/emergency evacuation plan, as implemented by the County of Riverside. The Project will be constructing residential uses, park facilities, drainage facilities, sewer lines and roadways. A limited potential exists to interfere with an emergency response or evacuation plan during construction. Control of access will ensure emergency access to the site and Project area during construction through the submittal and approval of a traffic control plan (TCP). The TCP is designed to mitigate any construction circulation impacts. The TCP is included as Standard Condition SC-TR-2. Prior to final map recordation, prior to grading**				

	permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787 (Standard Condition SC-HAZ-1). The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate DIF fees set forth in the Ordinance (Standard Condition SC-PS-1). Following construction, emergency access to the Project site and area will remain as was prior to the proposed Project. Therefore, implementation of the Project will not substantially impair an adopted emergency response plan or emergency evacuation plan. Any impacts are considered less than significant.				
	Wildfire b. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project, 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. **The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area." The site currently ranges in elevation from approximately 1,434 feet above mean sea level (AMSL) on the western side of the Project site to 1,445 AMSL in the northeastern corner of the site. Based on this information, the Project would not, 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. Any impacts are considered less than significant.				
	Wildfire c. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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 entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	same area is identified as a "moderate fire hazard area." The Project does not include and or 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. Any roads and utilities will be installed in accordance with the respective jurisdiction requirements. Holland Road, as parkway landscaping shall serve as a fire break for the Project. Any impacts will be less than significant.				
	Wildfire d. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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 entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area." The**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

	topography of the Project site is relatively flat with natural gradients less than 2% to the south-southwest toward SR 74. The site elevation is approximately 1,468 – 1,484 feet AMSL. The Project will include hardscape and landscape improvements that would serve tot stabilize the built environment. Based on this information, 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. Any impacts would be less than significant.				
	Wildfire e. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **Please reference the discussion in Threshold Wildfire a.**	*Mitigation not required*	*N/A*	*N/A*	*Mitigation not required*

CHAPTER 2 – INTRODUCTION

2.1 PROJECT OVERVIEW

Sun Holland, LLC (Project proponent) proposes to subdivide 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of roadways (Canterwood or the Project). The Project is located in unincorporated Riverside County, California east of the City of Menifee, and proposes on-site and off-site development. Required entitlements for the Residential Project include Change of Zone No. 1800007 (CZ No. 1800007), Tentative Tract Map No. 37439 (TTM 37439), and Plot Plan No. 180024 (PPT180024). Reference **Figure 2-1*, CZ 1800007*** and **Figure 2-2*, TTM 37439***.

The proposed off-site development (Off-site Project components) includes approximately 11,000 linear feet of sewer line, five temporary drainage channels, and flood control facilities that would serve the region as part of the larger Menifee Valley Master Drainage Plan/Area Drainage Plan (MDP/ADP). A detailed list of Project contributions to the MDP/ADP are included in Chapter 3, Project Description (Subsection 3.4.3, Regional Flood Control Channels). **Figure 2-3*, Aerial Photo with Project Components***, and **Figure 2-4, *Menifee-Holland ADP Ultimate Flood Control Drainage System***, depict the Residential Project, the Off-site Project components, the adjacent development patterns, and the proposed ADP***.***

The Residential Project site is bounded by Eucalyptus Road to the east, Craig Avenue to the south, Leon Road to the west, and Holland Road to the north. Reference **Figure 2-5, *Vicinity Map***.

The current land use on the Project site is vacant; partially plated in potatoes and cilantro. The site lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads and single family residential land uses.

Land uses surrounding the Residential Project are rural in character, dominated by large expanses of agricultural fields with scattered farmsteads, and include the following:

- North of the site is vacant land
- South of the site is vacant land
- East of the site is an agricultural use
- West of the site is vacant

Land uses surrounding the Off-site Project component are either vacant or have agricultural uses with the exception of the homes located southwesterly of the Leon and Holland Roads intersection, and the recreational vehicles in the Wilderness Lakes RV Resort, located southwesterly of the Briggs and Tres Lagos Roads intersection. Reference **Figure 2-3**, ***Aerial Photo with Project Components***.

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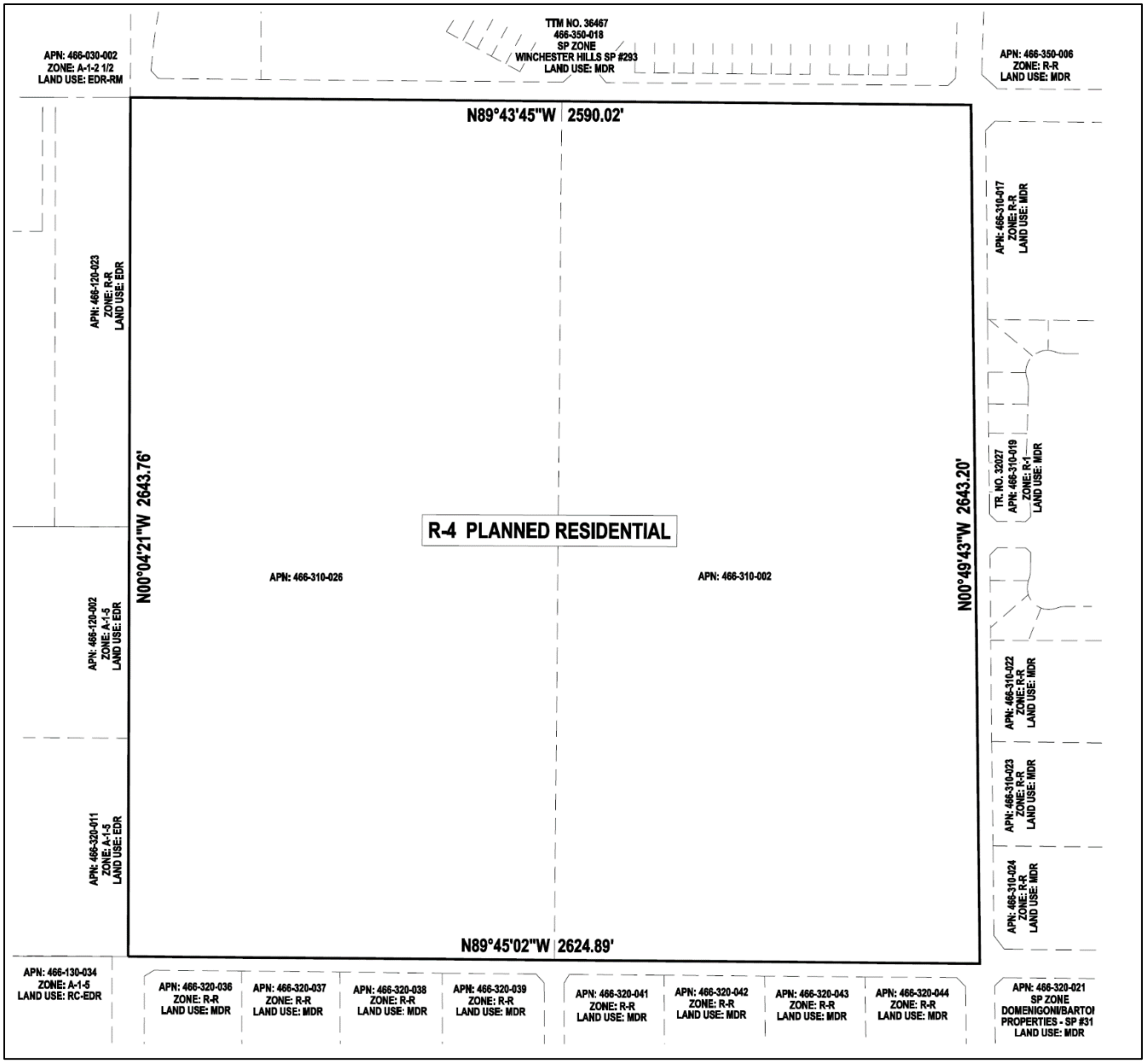
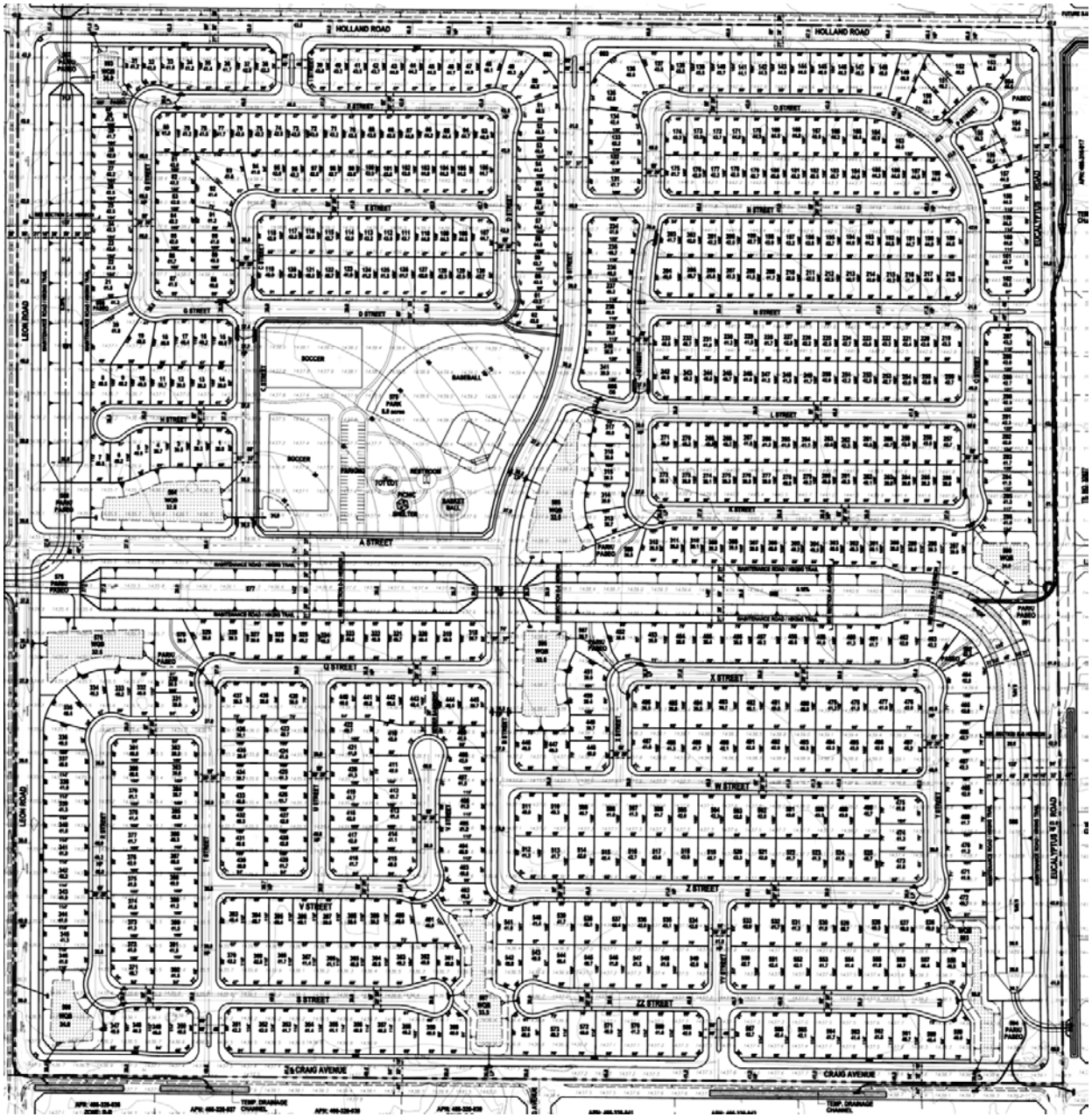
FIGURE 2-1
CZ 1800007



Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 2-2
TTM 37439


HOLLAND ROAD
HOLLAND ROAD
LEON ROAD
EUCALYPTUS ROAD
CRAIG AVENUE
CRAIG AVENUE
A STREET
B STREET
C STREET
D STREET
E STREET
F STREET
G STREET
H STREET
I STREET
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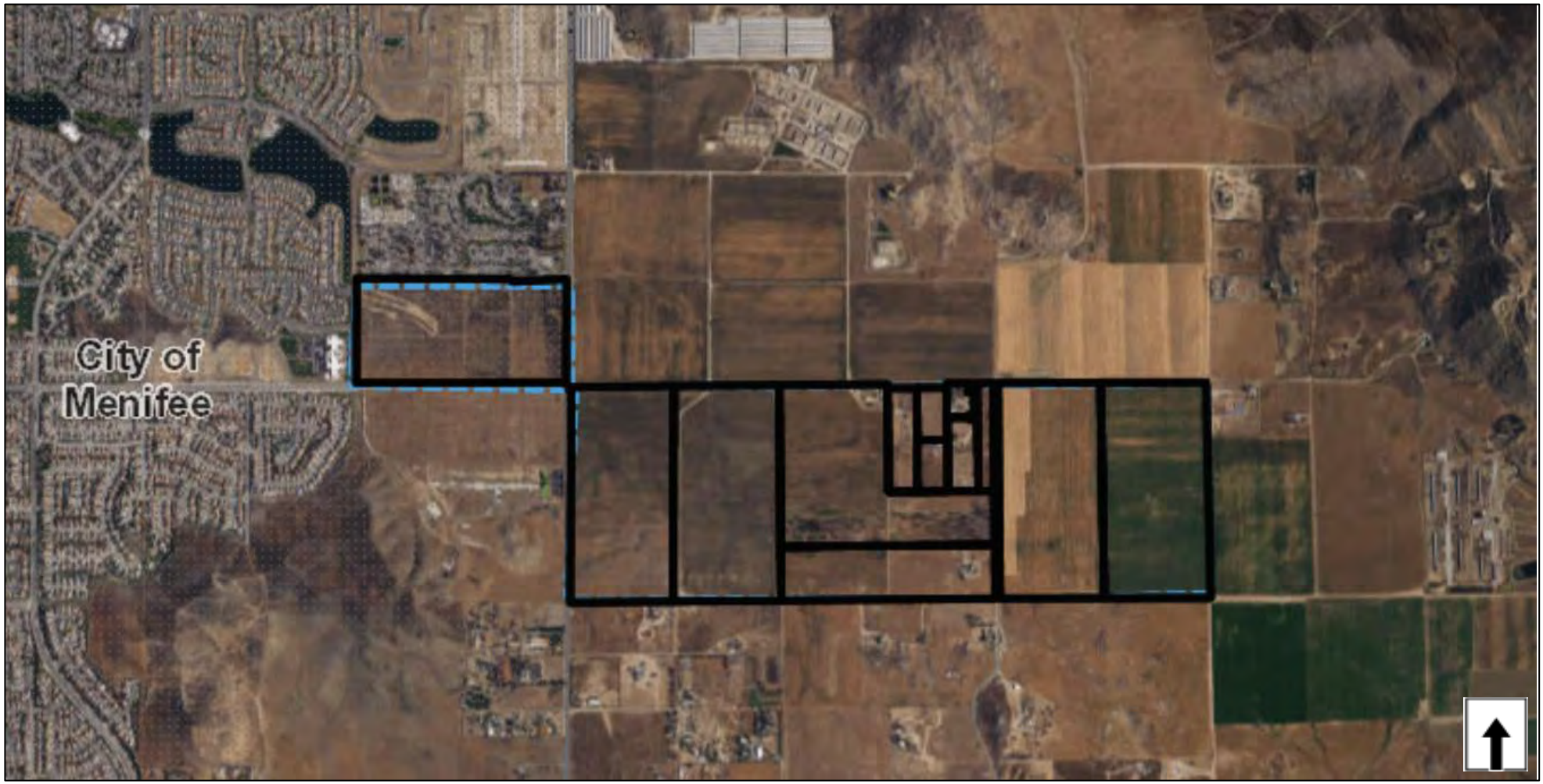
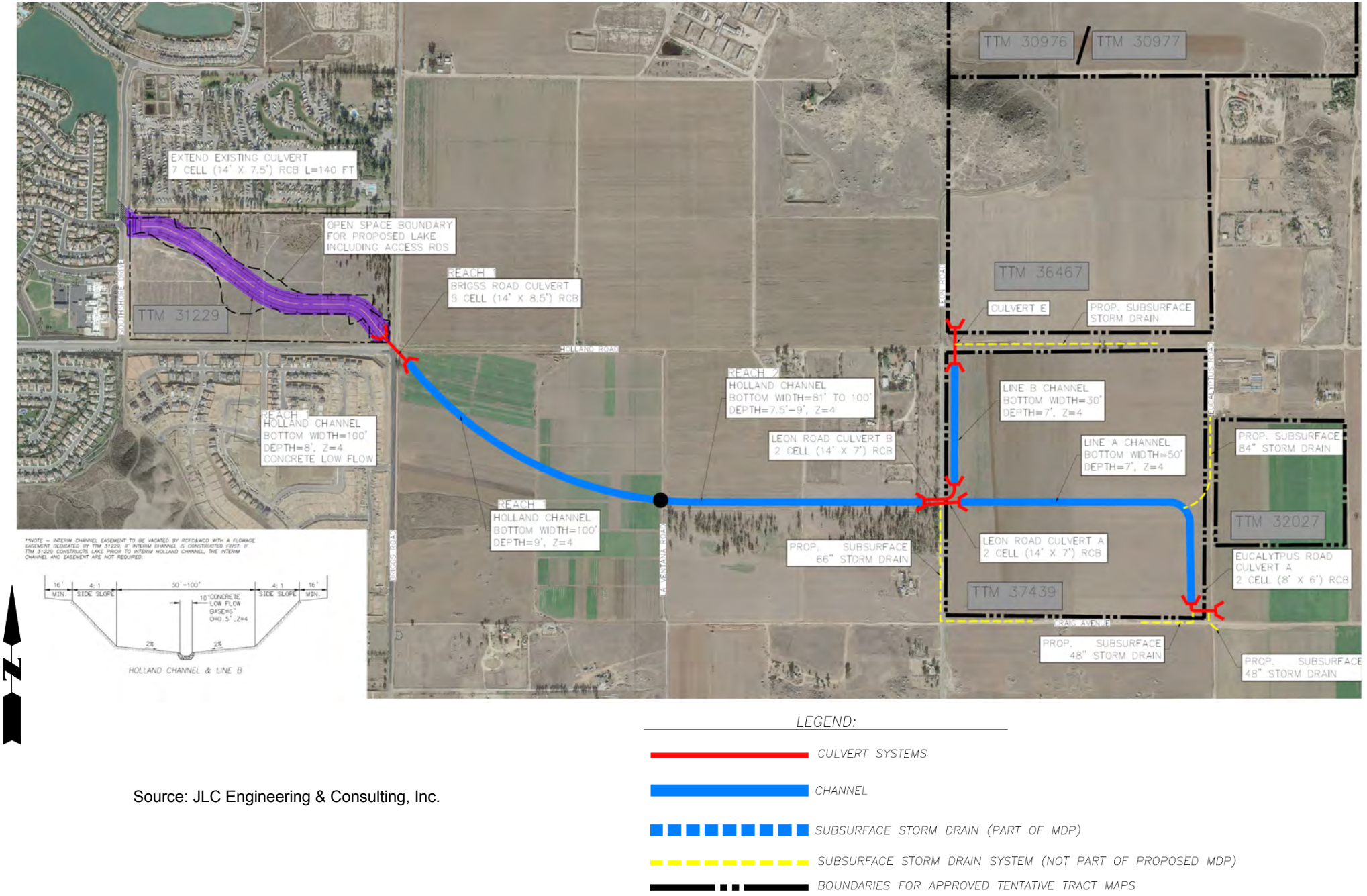
S STREET
T STREET
U STREET
V STREET
W STREET
X STREET
Y STREET
Z STREET
ZZ STREET
SOCCER
SOCCER
BASEBALL
TOT LOT
PICNIC
RESTROOM
BASKET BALL
PARK
PARK
PARK

FIGURE 2-3
AERIAL PHOTO WITH PROJECT COMPONENTS



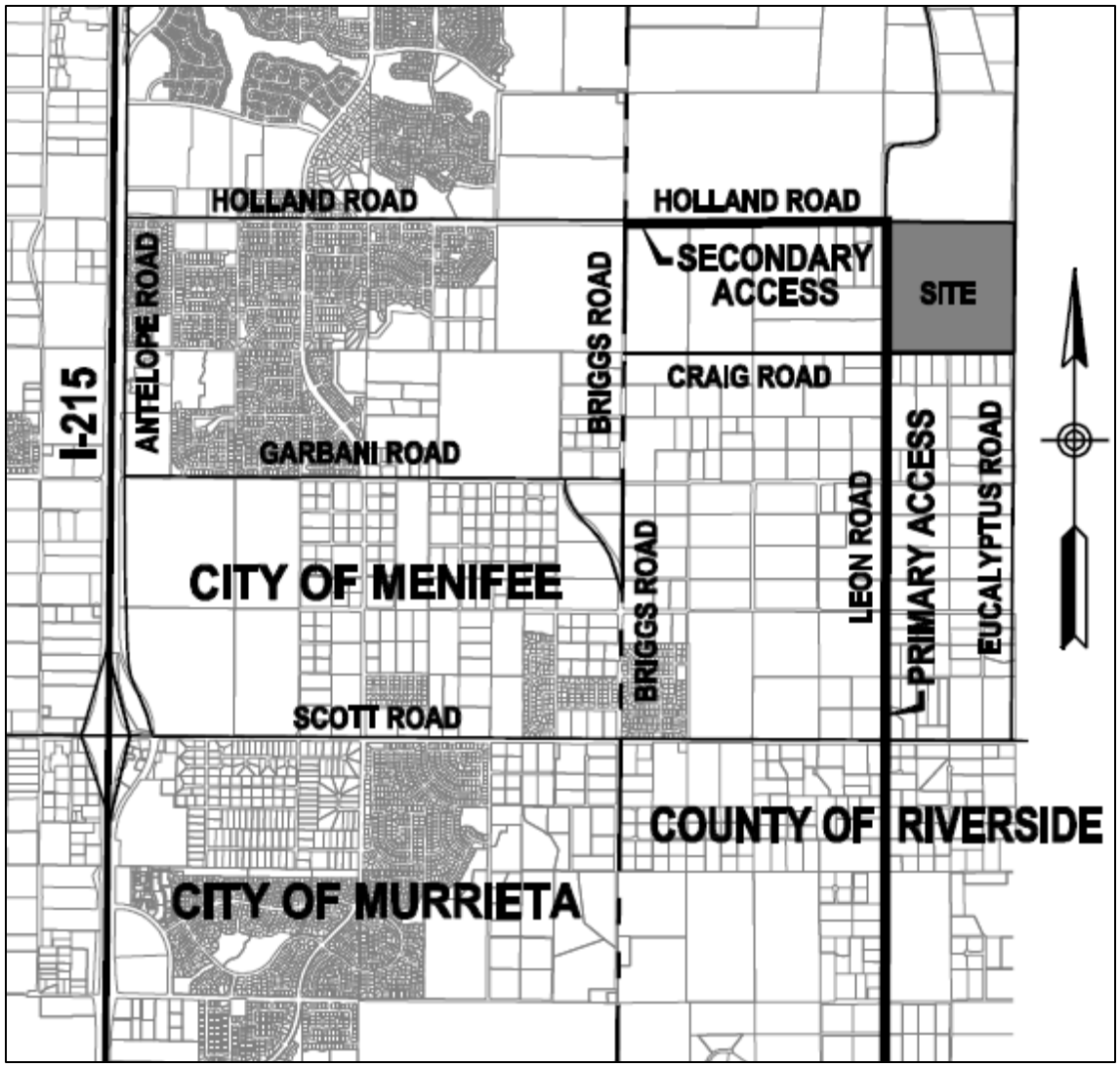
Source: Map My County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public

FIGURE 2-4
MENIFEE-HOLLAND ADP ULTIMATE FLOOD CONTROL DRAINAGE SYSTEM



Source: JLC Engineering & Consulting, Inc.

FIGURE 2-5
VICINITY MAP



Source: Canterwood TTM 37439 Exhibit

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2.1.1 Residential Project

The entitlements are required to permit the development of the Residential Project: Change of Zone No. 1800007 (CZ No. 1800007), Tentative Tract Map No. 37439 (TTM 37439) and Plot Plan No. 180024 (PPT180024).

2.1.1.1 CZ 1800007

The Residential Project site is currently zoned R-1 (One-Family Dwellings).

The proposed Project includes CZ 1800007, which would change the zoning classification of the 158.18-acre Residential Project site from R-1 to R-4 (Planned Residential). Reference **Figure 2-1, *CZ 1800007***.

No change to the zoning of the Off-site Project components is proposed or required.

2.1.1.2 TTM 37439

TTM 37439 proposes to subdivide the 158.18-acre Residential Project site into 574 single-family residential lots with lot sizes between 6,500 sq. ft. and 4,700 sq. ft., 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. Reference **Figure 2-2*, TTM 37439***.

The Project is proposing an 8.96-acre park, located at the center of the Project site, containing the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. The Project would also include six mini-parks / paseos each on a separate lot (lots 576, 579, 580, 582, 591, 594, and 604).

TTM 37439 proposes a density of 3.6 dwelling units/acre. TTM 37439 is proposed to be recorded in 4 phases.

TTM 37439 does not include the Off-site Project components.

2.1.1.3 PPT 180024

The 574 lots would be organized into four (4) individual neighborhoods, with lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft. The homes in each neighborhood would include five (5) architectural styles, including four (4) architectural elevations and three (3) floor plans.

Each home will include a two-car attached garage and driveways wide enough to provide parking for additional vehicles to help minimize the use of the parking spaces on the private streets by residents and guests.

A community park, 8.96 acres in size, is proposed at the center of the Project site. The park has a variety of active recreational amenities for Project residents and the general public, including at a minimum:

- Lighted ball field;
- Lighted soccer fields;

- Half-court basketball;
- Tot lot;
- Open turf play area(s);
- Picnic area with shade;
- Seating area(s);
- A restroom building; and
- Parking.

A comprehensive, interconnected public trail and walkway system is also proposed to provide residents, visitors and the public, convenient access to the on-site community park and open space. The drainage channels on Lots 577, 581, and 588 will be flanked on either side by a 16' wide maintenance road/hiking trail (Regional Trail), as well as 3-rail vinyl fencing on the channel side and tubular steel fencing on the outside edge of the trail.

The Project is also proposing landscape buffers, passive open space areas, numerous paseos (trails) with sidewalks totaling approximately 13,264 linear feet (LF), and 56,417 LF of sidewalks along the public streets.

The *Design Manual - Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439)* prepared by Matthew Fagan Consulting Services, Inc., February 2019 (**Appendix M**) contains overall design guidelines and additional Plot Plan information.

2.2 PURPOSE AND USE OF AN EIR

The County is serving as the Lead Agency for the California Environmental Quality Act (CEQA) compliance purposes based on its responsibility to approve the proposed Project.

CEQA was adopted to assist with the goal of maintaining the quality of the environment for the people of the State. Compliance with CEQA, and with its implementing guidelines, requires the agency making a decision on a project to consider the potential environmental effects/impacts of the project before granting any approvals or entitlements.

CEQA also requires the consideration of (i) a reasonable range of alternatives to the project or project location that could feasibly attain most of the basic project objectives and avoid or substantially lessen any of the significant environmental impacts and (ii) feasible measures that could minimize significant adverse impacts of the Project. (*CEQA Guidelines* §§ 15126.6 and 15126.4).

Thus, the Lead Agency, here the County, must examine feasible alternatives and identify feasible mitigation measures as part of the environmental review process.

CEQA also states "that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof." (*Public Resources Code* §21002*).*

As applied to the Project, the County, as Lead Agency, is required to focus on and identify potential site specific environmental impacts associated with implementing the Project. Where potential significant impacts are identified, the County must determine whether there are

feasible mitigation measures or alternatives that can be implemented to avoid or substantially lessen the potential significant environmental effects.

The first step in this process is the completion of an Initial Study (IS) to determine whether an EIR is required, and if an EIR is required, to issue a Notice of Preparation (NOP).

Based on the information in the IS, the County concluded that the Project, as proposed, might cause significant impacts to the following sixteen (16) issue areas that would require further analysis in an EIR:

- Aesthetics;
- Agriculture Resources;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology/Soils;
- Greenhouse Gas Emissions;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Population and Housing;
- Recreation;
- Transportation;
- Tribal Cultural Resources; and
- Utilities/Service Systems.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist Form. Two new environmental topics (Energy and Wildfire) were introduced to be analyzed in future Initial Studies; these environmental topics are being added to the DEIR to be analyzed and are presented as follows:

- Energy (Subchapter 4.18); and
- Wildfire (Subchapter 4.19).

The second step is to determine whether an Environmental Impact Report (EIR) is required; and if it is, to issue a Notice of Preparation (NOP) to notify the Office of Planning and Research that an EIR will be prepared, and solicit comments regarding the project from Responsible, Trustee and federal Agencies. (*CEQA Guidelines* §15375.)

The County prepared and circulated a NOP, with the Initial Study appended, for the Project. The NOP public review period began on October 8, 2018 and ended on November 6, 2018. Respondents were asked to send their input as to the scope and content of the environmental information and issues that should be addressed in the Project DEIR no later than the end of the 30-day review period. The County's "Notice of Scoping Meeting & Preparation of a Draft

Environmental Impact Report," is contained in Subchapter 8.1, *Notice of Preparation / NOP Distribution List*, of this DEIR.

The State Clearinghouse distributed the NOP (*SCH#2018101010*) to the interested agencies identified by the County, and to surrounding property owners within a 600' radius of the Project site both residential and off-site components. The NOP distribution list and the surrounding property owners list are contained in Subchapter 8.1, *Notice of Preparation / NOP Distribution List*, of this DEIR.

The County held a Scoping Meeting on Monday, November 5, 2018 at 1:30 p.m., at the Riverside County Administrative Center, 4080 Lemon Street, Riverside, CA 92501, in Conference Room 2A on the 1st Floor. The date, time, and location of the scoping meeting was announced in the NOP.

Seven (7) written responses were submitted in response to the NOP. No comments were provided at the scoping meeting. Subchapter 8.2, *NOP Comment Letters* includes a copy of each NOP comment letter received during the comment period.

All comments (written and oral) are summarized below, with a reference to where the issue will be addressed in Chapter 4, *Environmental Impact Evaluation*, is provided below.

Comment Letters

Comment Letter #1: State of California Governor's Office of Planning and Research (dated 10/8/2018):

- This letter documents the State Clearinghouse's submittal of the Notice of Preparation (NOP) for the proposed Project (SCH #2018101010) to thirteen (13) state agencies on October 8, 2018 and advises the recipients that responsible agencies have 30 days from the date of receipt to review and comment on the scope and content of the NOP.

Comment Letter #2: Native American Heritage Commission (dated 10/12/18):

This letter contains the following comments pertaining to tribal cultural resources:

- The lead agency (County) must consult with all Tribes that are traditionally and culturally affiliated with the Project's geographical area as early as possible to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.
- Utilize the CEQA Guidelines for consultation pursuant to Assembly Bill 52 (AB52).
- Utilize CEQA Guidelines for consultation pursuant to Senate Bill 18 (SB18).
- Utilize the following recommendations for Cultural Resources Assessments:
  - Contact the appropriate regional California Historical Research Information System Center for an archaeological records search.
  - Conduct an archaeological inventory survey, if required, and submit report per requirements.
  - Contact Native American Heritage Commission for a Sacred Lands File search and for a Native American Tribal Consultation List to inform consultation and plan for avoidance, preservation in place, or failing both, mitigation.

These comments will be addressed in Subchapter 4.6, Cultural Resources, and Subchapter 4.16, Tribal Cultural Resources.

Comment Letter #3: Department of Conservation's Division of Land Resource Protection (dated 10/19/18):

This letter contains the following comments pertaining to agricultural land and resources:

- The Project site contains Prime Farmland and Farmland of Statewide importance.
- The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources.
- The County as lead agency should not approve the proposed Project if there are feasible alternatives or feasible mitigation available that would lessen the significant effects of the Project.
- Establishing an agricultural conservation easement on land of at least equal quality and size can mitigate Project impacts.
- The lead agency (County) must fully investigate whether there is a need for the Project, whether it is possible to mitigate the loss of agricultural land, and whether there are environmentally superior alternatives to the Project.

These comments will be addressed in Subchapter 4.3, Agriculture and Forest Resources.

Comment Letter #4: California Department of Fish & Wildlife (CDFW) (dated 11/2/18):

This letter contains the following comments pertaining to biological resources:

- CDFW recommends that the DEIR accurately identify the MSHCP as both an adopted Natural Conservation Community Plan (NCCP) and an adopted Habitat Conservation Plan (HCP).
- The DEIR needs to address how the Project will affect the following MSHCP policies and procedures: Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP section 6.1.2), Protection of Narrow Endemic Plant Species (MSHCP section 6.1.3), and Needs and Procedures for the burrowing owl.

These comments will be addressed in Subchapter 4.5, Biological Resources.

Comment Letter #5: South Coast Air Quality Management District (SCAQMD) (dated 11/7/18) states:

This letter contains the following comments pertaining to the analysis of air quality and greenhouse gas emissions:

- Send directly to SCAQMD for review: the DEIR, the technical appendices for Air Quality (AQ) and Greenhouse Gases (GHG), including electronic versions of all air quality modeling and health risk assessment files, emission calculation spreadsheets and modeling input/output files.
- Use the SCAQMD CEQA Handbook and CalEEMod land use emissions software to forecast Project emissions.

- Quantify criteria pollutant emissions and compare the results to SCAQMD's regional pollutant emissions significance thresholds to determine air quality impacts.
- Calculate localized air quality impacts (using localized significance thresholds developed by SCAQMD or by performing dispersion modeling) and compare the results to SCAQMD's localized significance thresholds.
- Identify potential adverse air quality impacts for all phases of the Project (including demolition, if any, construction and operations) and for all Project-related air pollutant sources.
- Analyze air quality impacts from indirect sources, such as sources that generate or attract vehicular trips.
- If the Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment, including the analysis of toxic air contaminant impacts.
- Assess air quality impacts associated with the siting of incompatible land uses (such as placing sensitive receptors near air pollution sources, or vice versa).
- Identify mitigation measures and identify any impacts that would result from their implementation.
- If the Project generates significant adverse air quality impacts, discuss a reasonable range of potentially feasible alternatives in sufficient detail to allow a meaningful evaluation, analysis and comparison with the Project. Include a "no project" alternative, and alternatives to the Project or its location that will avoid or substantially lessen any significant effects.
- If the Project requires a permit from the SCAQMD, identify SCAQMD as a Responsible Agency under CEQA.

These comments will be addressed in Subchapter 4.4, Air Quality, and in Subchapter 4.15, Transportation.

Comment Letter # 6: Southern California Association of Governments (dated 11/7/18):

This letter contains comments pertaining to transportation, air quality, and land use compatibility impacts:

- Southern California Association of Governments (SCAG) is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities.
- SCAG reviews EIRs for Projects of regional significance for consistency with regional plans pursuant to CEQA and the CEQA Guidelines.
- SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for the preparation of the Regional Transportation Plan (RTP), including the Sustainable Communities Strategy (SCS).
- SCAG has reviewed the NOP for the Project.
- SCAG asks that environmental documentation be mailed to SCAG's office in Los Angeles or emailed to the contact information in the letter.
- The Lead Agency has the sole discretion in determining a local project's consistency with the RTP/SCS.
- SCAG recommends preparing an analysis that compares the Project side-by-side with SCAG's 2016 RTP/SCS Goals to determine whether the Project is consistent, inconsistent or in-applicable with the regional goals.

- A wide range of land use and transportation strategies are included in the 2016 RTP/SCS.
- Adopted demographics and growth forecasts (population, households and employment) are provided for the SCAG Region and for unincorporated Riverside County for the years 2020, 2035, and 2040.
- The Final Program EIR for the 2016 RTP/SCS includes a list of project-level performance-based mitigation measures that are applicable and feasible. These mitigation measures may be considered by the County for adoption and implementation.
- The County as Lead Agency is responsible for assigning project-level mitigation to meet project-level performance standards for each CEQA resource category.

These comments will be addressed in Subchapter 4.4, Air Quality and in Subchapter 4.15, Transportation.

Comment Letter # 7: California Department of Transportation (dated 11/26/18):

This letter contains recommendations regarding multimodal accessibility and traffic forecasting:

- As the owner and operator of the state highway system, California Department of Transportation (Caltrans) is responsible for consulting with local jurisdictions, here the County, when a proposed development may impact Caltrans facilities.
- Under CEQA, Caltrans is required to make recommendations to offset potential Project impacts to state highway facilities.
- Caltrans has reviewed the NOP for the Project and views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers.
- Caltrans recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system and is committed to ensuring that a multimodal transportation system serves the Project.
- The Riverside Transit Agency (RTA) does not provide bus service to the Project site. The nearest bus stop is 2.3 miles away (11 minutes bicycling or 45 minutes walking). Please coordinate with the RTA to address any potential route modifications and/or bus stop improvements to serve the Project that may be warranted.
- The County's Transportation Demand Management (TDM) requirements (Ordinance No. 726) requires new development projects to develop a TDM plan that includes: a proposed trip level and outlines TDM measures to achieve it. At a minimum, the trip level shall be equal to or greater than 12% of the vehicle trips that would normally be generated by the Project commencing in 1994, 20% of the vehicle trips that would normally be generated by the Project commencing in 2000, and 30% of the vehicle trips that would normally be generated by the Project commencing in 2006. Caltrans asks the Project proponent to consider including TDM measures that will promote the use of alternative transportation modes, which may include, but not be limited to: rideshare, vanpools, on-site amenities that would eliminate the need for additional trips (such as, cafeterias/restaurants), development that is pedestrian-oriented, transit-oriented and other non-traditional site designs, and bus stop improvements.
- The Office of Forecasting has reviewed the Project TIA to analyze past, present, and future traffic volumes and operational characteristics and provides the following comments:
  - o <u>TIA Exhibit 4-5: Project Only (Phase 2 Project Buildout: 2025) Traffic Volumes:</u> Regarding intersection #4, consider substituting the intersection at I-215 at Newport Road, which is 3 miles from the Project site, for the intersection at I-215 NB Ramps and Scott Road which is 4.1 miles away from the Project site.
  - o Amend the TIA to include the I-215 / Newport Road NB and SB ramps.

  - Revise the trip distribution in the TIA so a larger number of NB trips use the I-215/Newport Road interchange.
  - Segment analysis – Perform the basic freeway merge, diverge analysis in the Highway Capacity Software (HCS 7) Freeway "Facility" Module.
  - The AM Peak Hour in the HCS 7 analysis was performed between 1 AM and 4 AM– please explain why this was done and if it is a mistake, please correct it.
- When these comments have been addressed, please forward the revised TIA to Caltrans for further consideration and comment.

These comments will be addressed in Subchapter 4.15, Transportation.

Scoping Meeting Commenters

There were no commenters at the November 5, 2018 Scoping meeting.

CEQA requires the County to consider the environmental information in the Project record, including this DEIR, before making a decision on the proposed Project. The County must consider and decide to approve, modify, or reject the Project, as proposed and described in Chapter 3, *Project Description*, of this DEIR.

This DEIR addresses all of the issue areas identified in the IS and provides information about the potential environmental impacts of implementing the Project for use by the County, interested and responsible agencies and parties, and the general public.

The County will serve as the CEQA Lead Agency pursuant to the *CEQA Guidelines* §15051(b)(1). The DEIR for the Project was prepared by Matthew Fagan Consulting Services, Inc. (MFCS), who was retained to help the County conduct the environmental review of the Project required by CEQA.

The County has conducted an independent review of the contents of the Project DEIR and concurs in the conclusions and findings contained herein.

2.3 SCOPE AND CONTENT OF THIS DEIR

As discussed in Section 2.2, implementation of the proposed Project will have the potential to cause significant adverse environmental impacts to portions of sixteen (16) issue areas. The County considered comments on the scope of the DEIR submitted during the NOP comment period and has determined that the DEIR does not need to be expanded to address and/or clarify these issues. However, due to changes to the CEQA Guidelines and Appendix G, two new issue areas, Energy and Wildfire, will be evaluated in the DEIR.

In addition to evaluating the eighteen (18) environmental issue areas listed in previously in Section 2.2, this DEIR contains all of the information mandated by the CEQA and the State CEQA Guidelines. **Table 2-1, *Required DEIR Contents***, lists the contents required in a DEIR along with a reference to the chapter and page number where these issues can be reviewed in the document. This DEIR includes two volumes. Volume 1 contains the CEQA mandated sections and Volume 2 contains the Project-specific technical appendices.

Table 2-1
Required DEIR Contents

Required Section (CEQA)	Section in DEIR
Table of Contents (Section 15122)	
Summary (Section 15123)	Chapter 1
Introduction	Chapter 2
Project Description (Section 15124)	Chapter 3
Environmental Setting (Section 15125)	Chapter 4
Significant Environmental Impacts (Section 15126.2.a)	Chapter 4
Unavoidable Significant Environmental Effects (Section 15126.2.b)	Chapter 4
Mitigation Measures Proposed to Minimize Significant Effects (Section 15126.4)	Chapter 4
Cumulative Impacts (Section 15130)	Chapter 4
Alternatives to the Proposed Project (Section 15126.6)	Chapter 5
Growth-Inducing Impact (Section 15126.2.d)	Chapter 6
Irreversible Environmental Changes (Section 15126.2.c)	Chapter 6
Effects Found Not to be Significant (Section 15128)	Chapter 6
Organizations and Persons Consulted (Section 15129)	Chapter 7
Appendices	Chapter 8

2.4 DEIR FORMAT AND ORGANIZATION

This DEIR contains eight chapters in Volume 1, and an electronic set of technical appendices in Volume 2, which, when considered as a whole, provides an evaluation of the potential significant adverse environmental impacts associated with the proposed Project.

The following provides a summary of the content of each Chapter in Volume 1.

- **Chapter 1** contains the Executive Summary. This includes an overview of the proposed Project and a summary of potential adverse impacts and mitigation measures.

- **Chapter 2** provides an introduction to the document, including background information about the proposed Project, the purpose of the Project, and how the Project (including the environmental review) will be implemented (including the CEQA process to date and the scope of the DEIR).

- **Chapter 3** contains the Project Description, which is used to forecast environmental impacts. This chapter describes how the proposed Project may alter the existing environment and sets the stage for the environmental impact forecasts that follow.

- **Chapter 4** presents the environmental impact forecasts for the issues in the DEIR. For each environmental issue identified in Sections 2.1 and 2.2, the following impact evaluation is provided:
  - Potential impacts forecast to occur if the Project is implemented;
  - Any proposed design features, code requirements, conditions of approval, and/or mitigation measures;
  - A discussion of any Project unavoidable adverse impacts; and
  - An analysis of cumulative impacts.

- **Chapter 5** contains the evaluation of alternatives to the proposed Project. Included in this section is an analysis of the No Project Alternative, and other Project alternatives.

- **Chapter 6** presents the topical issues CEQA requires in an EIR. These include any significant irreversible environmental changes and growth inducing impacts of the proposed Project.

- **Chapter 7** describes the resources used in preparing the DEIR. This includes persons and organizations contacted; a list of preparers; and the bibliography.

- **Chapter 8** contains those materials referenced as essential appendices to the DEIR, such as the NOP. Technical Appendices are provided in Volume 2 of the DEIR, under separate cover on a CD. All Appendix materials are referenced at appropriate locations in the text of the DEIR.

2.5 AVAILABILITY OF THE DEIR

This DEIR has been distributed directly to all public agencies and interested persons on the County's NOP mailing list (see Subchapter 8.1, *Notice of Preparation / NOP Distribution List*), notified by the State Clearinghouse, as well as any other requesting agencies or individuals. All reviewers will be provided 45 days to review the DEIR and submit comments to the County for consideration and response.

The DEIR is available for public review and may be downloaded at the County's website at: http://planning.rctlma.org.

The DEIR is also available for public review at the following locations during the 45-day review period:

Riverside County Administrative Center
4080 Lemon Street, 12th Floor
Riverside, CA 92501
951.955.3025

Riverside Public Library
3581 Mission Inn Avenue
Riverside, CA 92501

Paloma Valley Library
31375 Bradley Road
Menifee, CA 92584

2.6 REVIEW PROCESS

At the end of the DEIR review period, after receiving comments on the DEIR, the County will prepare a Final EIR for certification prior to making a decision on the Project. The contents of the Final EIR are governed by *CEQA Guidelines* §15132.

Information about the EIR public review period and the public hearings for the proposed Project

can be obtained by contacting Mr. Russell Brady, Project Planner at the County. Questions and comments submitted by mail should be addressed to:

Riverside County Planning Department
Attention Russell Brady, Project Planner
4080 Lemon Street, 12th Floor
Riverside, CA 92502
951.955.3025

Questions and comments may also be e-mailed to Russell Brady at the following address: rbrady@rivco.org.

Certain components of the Project may be subject to review and approval by other state agencies such as the filing of a Notice of Intent for a Construction Activity General Permit. Other public agencies whose approval of the DEIR may be required include:

- South Coast Air Quality Management District (AQMD);
- Riverside County Flood Control and Water Conservation District (RCFC&WCD);
- Eastern Municipal Water District (EMWD);
- Riverside Transit Agency (RTA);
- California Regional Water Quality Control Board (RWQCB)
- Caltrans District 8; and
- California Department of Fish & Wildlife Region 6.

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CHAPTER 3 – PROJECT DESCRIPTION

3.1 INTRODUCTION

Sun Holland, LLC ("Project proponent") proposes to implement the proposed Project, which consists of the Residential Project (CZ 1800007, TTM 37439, and PPT 180024) and the Off-site Project components (described in more detail below) to allow the subdivision of 158.18 acres into 574 residential units ("Project").

This chapter contains a detailed description of the proposed Project with a focus on those characteristics and activities that may cause physical changes in the environment. The description contained in this Chapter provides a written summary of the proposed Project as it will be developed if the entitlements are approved by the County.

3.2 PROJECT OBJECTIVES

A project's objectives define the purpose or intent that a project proponent hopes to achieve by implementing a specific project. The following are the proposed Project's objectives:

- Provide a variety of housing opportunities to assist the County in meeting General Plan Housing Element Goals and Objectives;
- Provide a centrally located community park with active and passive recreational opportunities that meets the recreation needs of future residents;
- Develop a comprehensive interconnected public trail and walkway system within the Project and connecting to the County-wide trail system;
- Develop joint use maintenance roads which will serve as hiking trails when adjacent to regional drainage facilities;
- Development of a comprehensive Project design that is sensitive to the environment, aesthetically pleasing, provides for the protection of health and safety, and promotes the neighborhood, the community, the County and the region;
- Take into consideration the existing topographic, geologic, hydrologic, and environmental opportunities and constraints, and create a Project design that essentially conforms to the condition of the land by maintaining and using basic landforms where practical; and
- Establish a Project-wide circulation system that meets regional and local transportation needs and accommodates a variety of transportation modes, including roadways, sidewalks and bicycle lanes.

3.3 PROJECT LOCATION

The proposed Project is located in Riverside County, California, east of the City of Menifee, and includes the Residential Project and the Off-site Project components.

The Residential Project is located west of Eucalyptus Road; north of Craig Avenue; east of Leon Road; and south of Holland Road. The Residential Project site consists of a generally square-shaped tract of agricultural land in Assessor's Parcel Numbers (APN) 466-310-002 and -026, bounded by Holland Road on the north, Eucalyptus Road on the east, Craig Avenue on the south, and Leon Road on the west. Reference **Figure 3-1, *Assessor's Parcel Map***.

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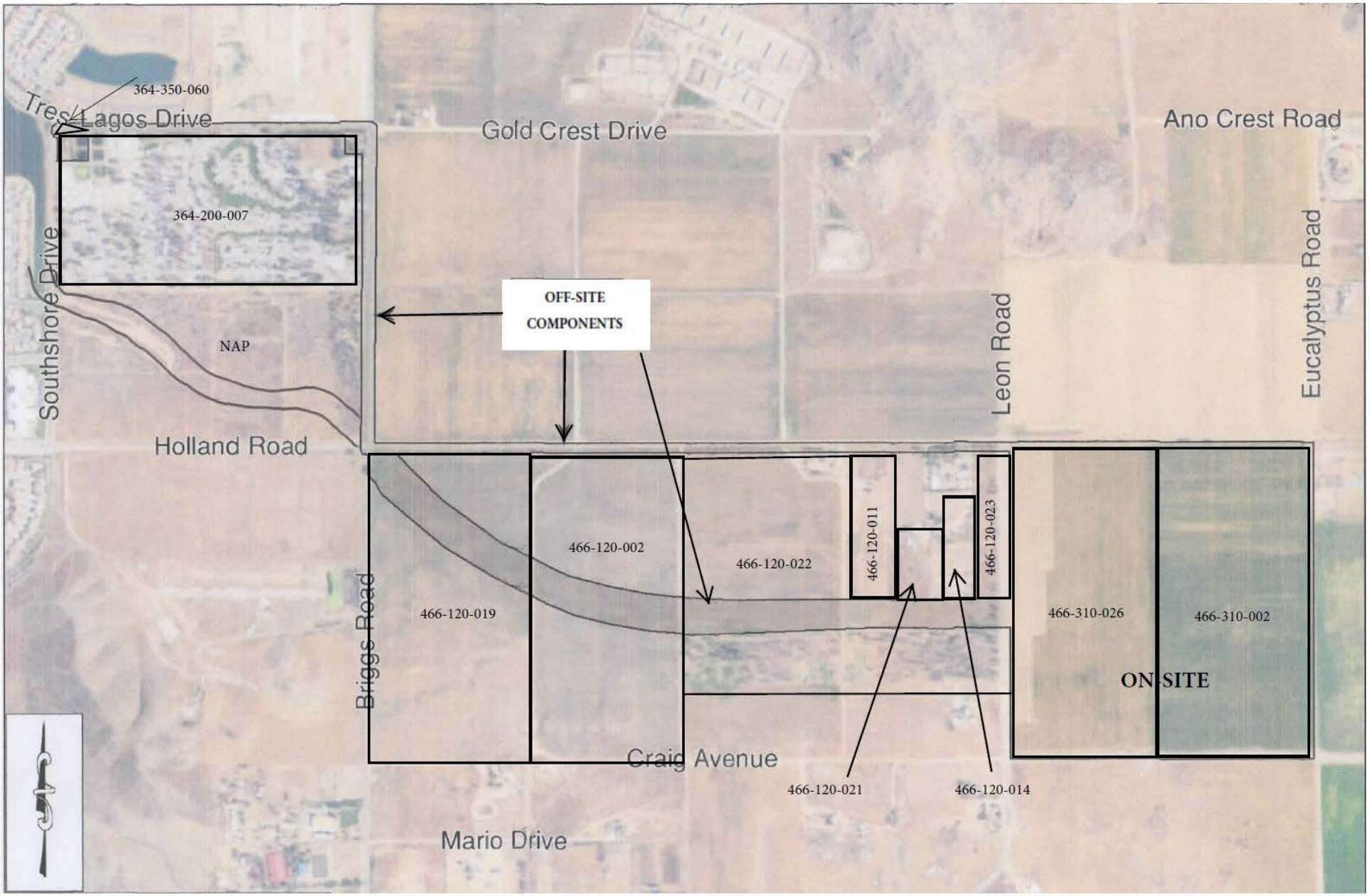
Figure 3-1
ASSESSOR'S PARCEL MAP



Source: Subchapter 8.3 of this DEIR, Initial Study

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The Off-site Project components include: an offsite trapezoidal earthen drainage channel (Holland Channel) located immediately to the west of the proposed Residential Project site composed of flat agricultural land that is being used to growing some crops but that also contains several farmhouses and a dairy farm in the eastern portion.

The proposed offsite trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Southshore Drive at the west and is bounded at the east by Eucalyptus Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Southshore Drive. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed in the Holland Road, Briggs Road, and Tres Lagos Road rights of way (ROW). All three of these roadways have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, properties adjacent to the off-site sewer are either vacant or have agricultural uses.

Figure 2-5, ***Vicinity Map***, and **Figure 2-3**, ***Aerial Photo with Project Components***, provided previously in Chapter 2 of this DEIR, depicts the Residential Project and the Off-site Project components.

The Residential Project is located in Section 8, Township 6 South, Range 2 West and the Off-site Project components are located in Section 7, Township 6 South, Range 2 West, Section 1, Township 6 South, Range 3 West, and Section 8, Township 6 South, Range 2 West.

3.3.1 Environmental Setting

The Project area is separated from the coastline approximately 34 miles across the Santa Ana Mountain range. Regional access to the area is provided to the general area in a north-south direction by the Interstate 215 (I-215) freeway and by Highway 79, and State Route 74 in an east-west direction.

The proposed Project is located in the eastern portion of the Menifee Valley, one of the many tectonically controlled valleys within the valley-and-ridge systems found in the Perris Block. These structurally depressed troughs are filled with non-marine sediments of upper Pliocene through recent age, while the ridges are typically composed of plutonic igneous rocks, metasedimentary rocks, and late-stage intrusive dikes.

The Perris Block is defined as a region between the San Jacinto and Elsinore-Chino fault zones, bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley. It is considered to have been active since Pliocene time. The Project area lies across the level valley floor, away from the flanks of any of the ridge systems. In this area, the valley trends nearly east-west and is likely to be more erosional than tectonic in origin. More detailed discussions of the Environmental Setting are included within each impact discussion within Section 4 of the Draft EIR.

According to the *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis,* prepared by Urban Crossroads, Inc., February 27, 2019 (**Appendix C**), the closest sensitive

receptor is located 237 feet west of the Project site. For purpose of analysis, the nearest sensitive receptor at location R2 was utilized as it represents existing residential homes. Although Locations R5 and R6 are closer in proximity, the lots are currently vacant therefore, no sensitive receptors currently reside at these locations and therefore would not be exposed to emissions during construction of the Project. **Figure 4.4-1**, ***Receptor Locations***, (located in Subchapter 4.4, Air Quality, of this DEIR) depicts the locations of R1 through R6 and the Project site.

According to the *Canterwood (Tentative Tract Map No. 37439) Noise Impact Analysis,* prepared by Urban Crossroads, Inc., September 19, 2018 (**Appendix J**), the closest sensitive receptor for the Residential Project components is also known as location R2, located approximately 237 feet west of the Project site. **Figure 4.12-5, *Construction Activity and Receiver Locations***, (located in Subchapter 4.12, Noise, of this DEIR) depicts the location of R2 and the Project site.

3.4 PROJECT CHARACTERISTICS

3.4.1 Project Entitlements

As stated in Subchapter 3.1, the proposed Project includes the following entitlements:

- Change of Zone No. 1800007 (CZ 1800007);
- Tentative Tract Map No. 37439 (TTM 37439);
- Plot Plan No. 180024 (PPT180024); and
- Tentative Parcel Map No. 37864 (TPM 37864) Schedule J

The Project includes three land uses on the 158.18-acre site: the Residential Project, the Off-site Residential Project components, and the open space land use component.

3.4.1.1 Change of Zone 1800007

CZ 1800007 proposes to change the zoning classification on the entire 158.18-acre Project site from R-1 (One Family Dwellings) to R-4 (Planned Residential). Reference **Figure 2-1*, CZ 1800007,*** provided previously in Chapter 2 of this DEIR.

3.4.1.2 TTM 37439

TTM 37439 proposes the subdivision of 158.18 acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. Reference **Table 3-1**, ***TTM 37439 Specifics***, below. The proposed Project includes four (4) neighborhoods, with minimum lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft.

Lot 575 is an 8.96-acre park with the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. Lots 576, 579, 580, 582, 591, 594, and 604 are mini-parks/paseos.

The density of TTM 37439 is 3.6 dwelling units/acre. Reference **Figure 2-2*, TTM 37439,*** provided previously in Chapter 2 of this DEIR. It is anticipated that TTM 37439 would be recorded in 3 phases.

Table 3-1
TTM 37439 Specifics

Type	Area (acres)	Number of Lots
Residential	79.54	574
Open Space	25.81	25
Drainage Basins	7.23	9
Project Roadways	45.60	--
TOTAL	**158.18**	**608**

An Amended Tentative Tract Map 37439 (with Remainder Parcel) was prepared subsequent to the Notice of Preparation, but prior to circulation of this DEIR. Reference **Figure 3-2, *Amended TTM 37439***.

The purpose of this amended map is to be consistent with **Policy SCMVAP 6.1** (see Subchapter 4.11 Land Use and Planning of this DEIR) which is currently under consideration for change as part of the Harvest Valley/Winchester Community Plan update yet is still currently in effect. A total of 446 residential lots and one remainder parcel of 25.3 acres is proposed with the Amended Tentative Tract Map. 37439.

Policy SCMVAP 6.1 states:

> "*In general, the program would establish guidelines to be incorporated into individual Traffic Impact Analyses that would monitor overall trip generation from residential development to ensure that overall within the Highway 79 Policy Area development projects produce traffic generation at a level that is 9% less than the trips projected from the General Plan traffic model residential land use designations. Individually, projects could exceed the General Plan traffic model trip generation level, provided it can be demonstrated that sufficient reductions have occurred on other projects in order to meet Level of Service standards.*"

At 574 single-family dwelling units, the Project is not consistent with the 9% reduction requirement. In order to be consistent with the 9% reduction requirement, the maximum of approximately 496 single-family dwelling units would be allowed.

The subdivision would be divided into three (3) phases. Reference **Figure 3-3, *TTM 37439 Phasing***. Phase 1 will build 129 lots, Phase 2 will build 130 lots, and Phase 3 will build 187 lots. The phasing map represents the logical development of the Project in terms of on- and off-site infrastructure improvements needed to support each phase of development.

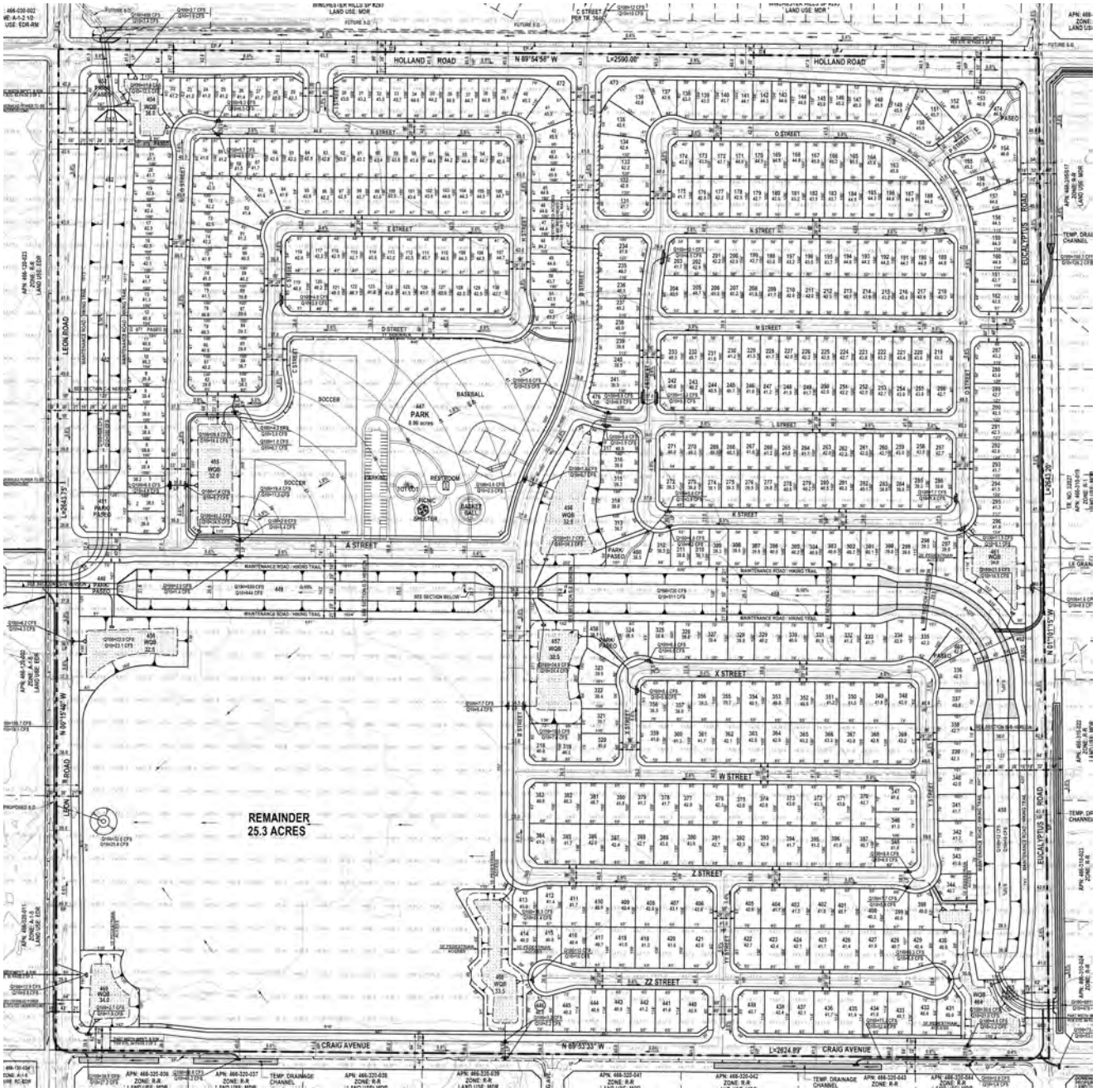
Although the subdivision has been revised to reduce the number of residential lots, the analysis within this EIR and the technical reports that support it are based on the total initial 574 residential units. The reduced number of units from the revised subdivision generally results in a reduction in impacts from what is assumed in this EIR. As applicable, this is noted and discussed in detail in the following EIR sections.

3.4.1.3 TPM 37864

A Schedule J Map has been prepared for the Project to subdivide the Project site into 9 lots. Reference **Figure 3-4, *Tentative Parcel Map No. 37864 Schedule J***. According to Ordinance No. 460, a "Schedule J Map" is defined as any division of land solely for the purposes of

financing or conveying title to all or a portion of the land. A Schedule "J" subdivision map does not create any legal building sites. A Schedule "J" subdivision map shall not be considered a vesting map.

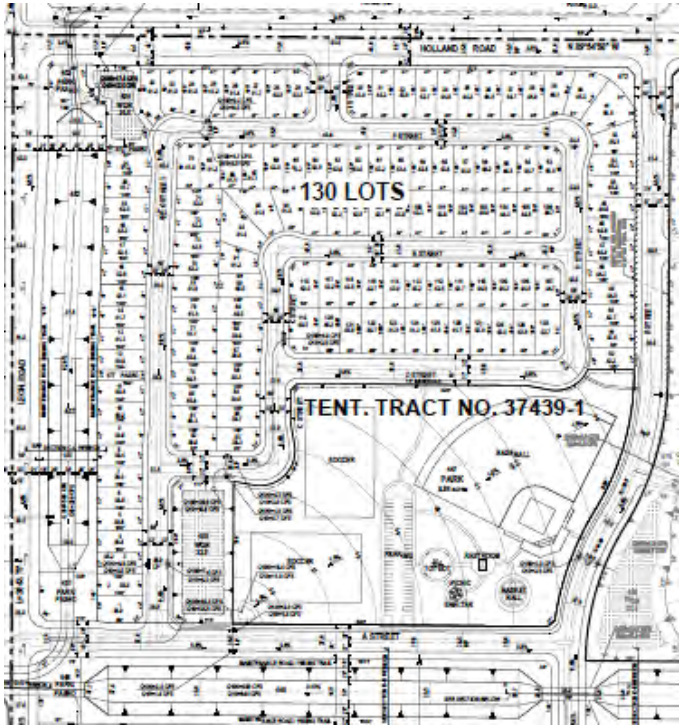
Figure 3-2
AMENDED TTM 37439

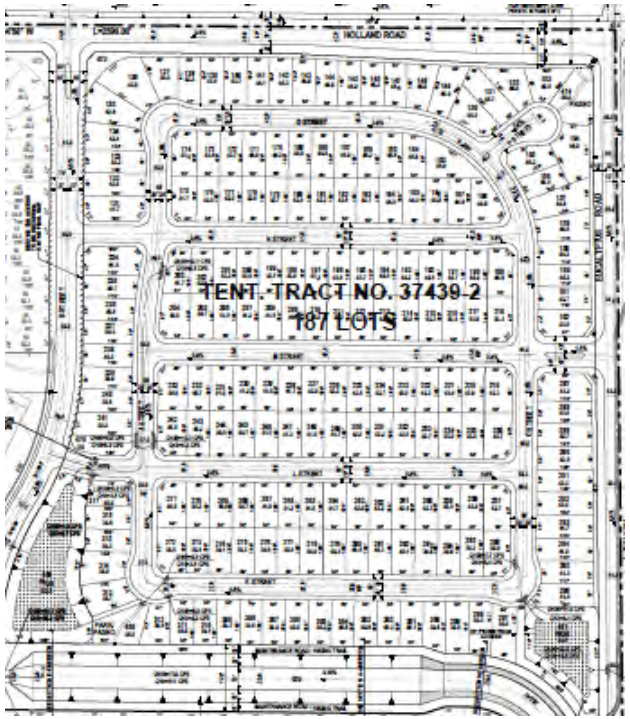


Source: VSL Engineering Plans, January 2020

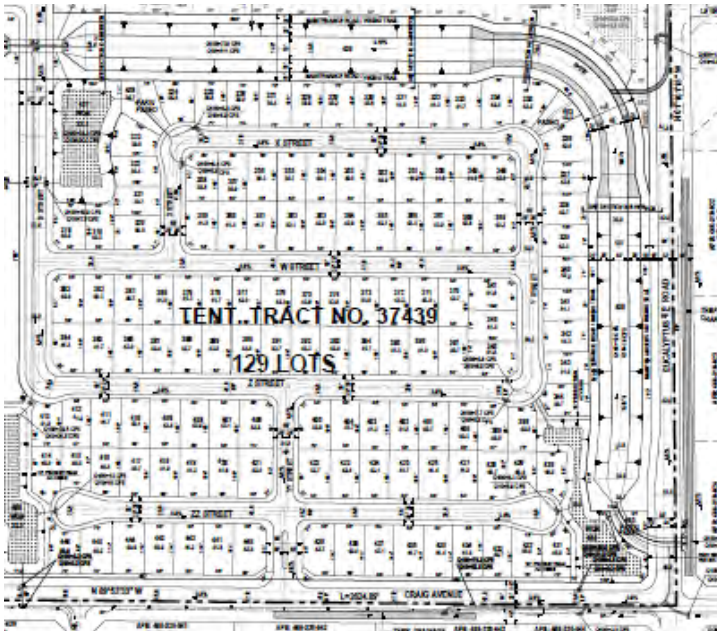
Figure 3-3
TTM 37439 PHASING

PHASE 2
130 LOTS





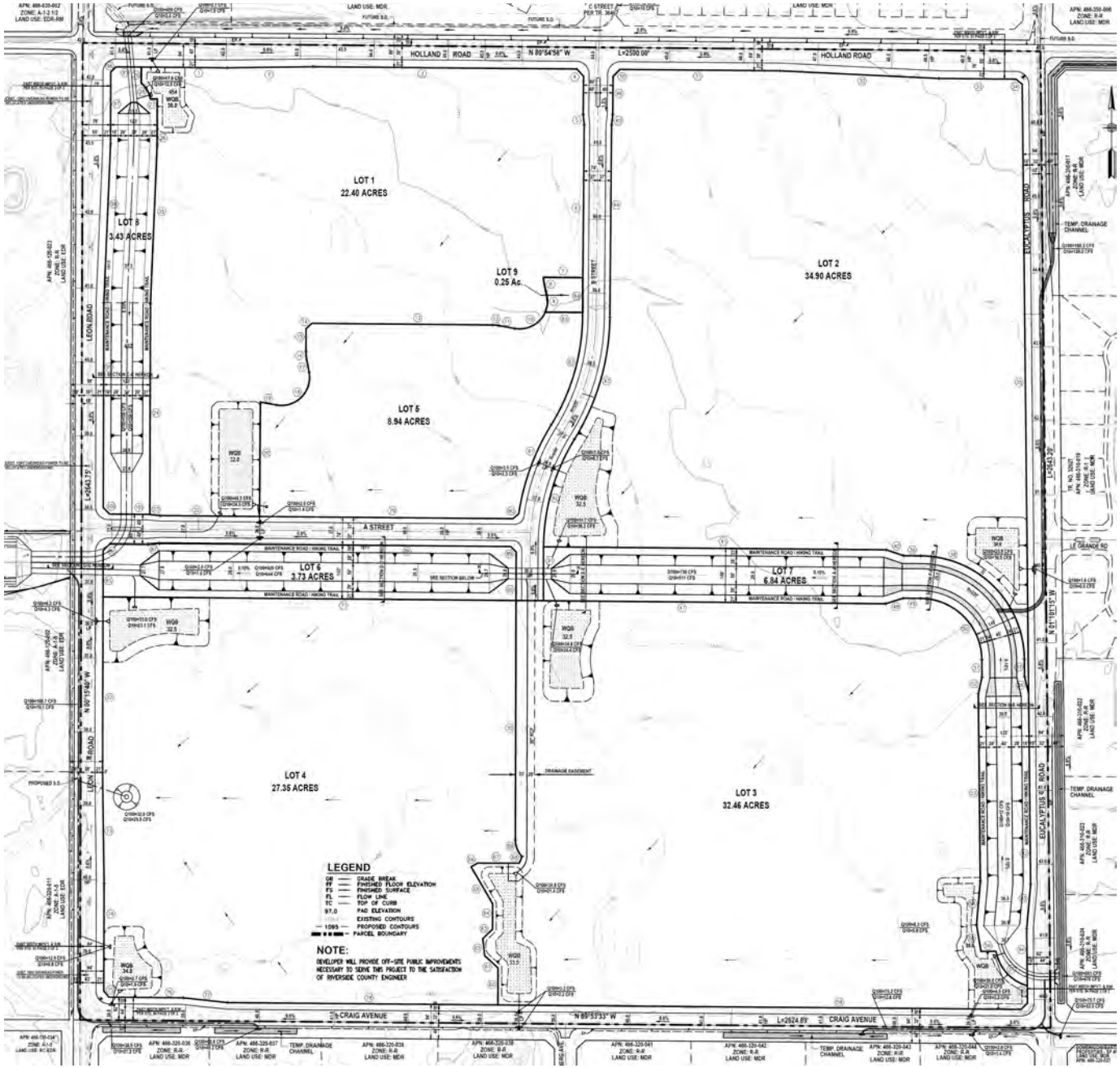
PHASE 3
187 LOTS



PHASE 1
129 LOTS

Source: VSL Engineering Plans, January 2020

Figure 3-4
TENTATIVE PARCEL NO. 37864 SCHEDULE J



Source: VSL Engineering Plans, January 2020

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3.4.1.4 PPT 180024

A total of 574 single-family residential lots are proposed. The proposed Project includes four (4) individual neighborhoods, with minimum lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft. Five (5) architectural styles have been provided. A minimum of four (4) architectural elevations and three (3) floor plans are required for each neighborhood comprised of 50 or more homes.

The centerpiece of the community is a minimum 8.96-acre community park located in northwest portion of the Project. The Project also features landscape buffers, passive open space areas, numerous paseos, and approximately 13,264 LF of trails/paseos and 56,417 LF of public street sidewalks. The community park would provide a variety of active recreational amenities for residents and the general public. Active recreational amenities would include, at a minimum, the following:

- Lighted ball field;
- Lighted soccer fields;
- Half-court basketball;
- Tot lot;
- Open turf play area(s);
- Picnic area with shade;
- Seating area(s);
- A restroom building; and
- Parking.

The Project includes a comprehensive, interconnected public trail and walkway system that provides residents and visitors with convenient access to the on-site community park and open space. Drainage channels on lots 577, 581, and 588 will be flanked on either side by a 16' wide maintenance road/hiking trail (Regional Trail), as well as 3-rail vinyl fencing on the channel side and tubular steel fencing on the outside edge of the trail. Sidewalks will be provided along all Project streets, as well as within the paseos.

Parking will be provided with two car attached garages for each home as well as on-street parking spaces. All homes are designed with driveways, which can also provide parking for additional vehicles, which would assist in minimizing the use of the parking spaces on the private street by residents and guests.

The Project is bordered by Leon Road, Holland Road, Eucalyptus Road, and Craig Avenue. Access to the proposed Project may be taken via any of these streets. Please see Subsection 3.d. Circulation, below, for more details on Project roadways and circulation.

Reference *Design Manual - Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., August 2018 (**Appendix M**), which provides overall guidelines and additional Plot Plan information.

3.4.2 Off-Site Project Components

The Off-site Project components consist of the following:

- o 10,850 linear feet of 33" and 30" diameter sewer line, which will be approximately 15 feet in depth and will extend from Leon Road midway between Holland and Craig Roads, then proceed 5,780' northwesterly within an Eastern Municipal Water District easement on separately owned property to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW to Tres Lagos Drive, then proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.
- o 5,300 linear feet of roadway improvements installed along Holland Road with 8 to 10-foot wide depressed shoulders. No curb, gutter, sidewalks, or streetlights shall be installed. Roadway improvements will be south of the San Pedro Farms Project (TTM 36467), known as Assessor Parcel Number 466-030-002.
- o Temporary Drainage Channels: A total of five (5) temporary drainage channels will be provided for the Project. These are located along Craig Avenue and Eucalyptus Road ROWs. Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.

Reference **Figure 2-5**, ***Vicinity Map***, **Figure 2-3**, ***Aerial Photo with Project Components***, and **Figure 2-4**, ***Menifee-Holland ADP Ultimate Flood Control Drainage System*****,** provided previously in Chapter 2 of this DEIR, for the locations of the Residential Project and the Off-site Project components.

3.4.3 Regional Flood Control Channels

The proposed Project includes several regional flood control channels both within and outside the Project boundary. **Figure 2-4, *Menifee-Holland ADP Ultimate Flood Control Drainage System,*** provided previously in Chapter 2 of this DEIR, identifies the facilities that are expected to be included (with other facilities) in a future MDP/ADP to be prepared by the Riverside County Flood Control and Water Conservation District (RCFC&WCD). The MDP will include the regional flood control facilities needed to address the primary flooding issues in the watershed. The ADP will provide a funding mechanism for the regional facilities based on development fees collected in the adopted ADP. In order to implement the MDP and associated ADP, the RCFC&WCD will likely enter into various agreements, such as a cooperative agreement prior to RCFC&WCD taking over the facilities for operation and maintenance, and a license agreement for trail maintenance, etc.

The MDP/ADP facilities proposed as part of the Project are described in further detail as follows:

1. A 620-foot long 14' by 8.5' box culvert that crosses Briggs Road and will drain into a Lake/Channel system proposed as part of Tract Map 31229. Please note that Tract map 37439 will have to construct an interim earthen channel, with a concrete low flow channel, bisecting Tract Map 31229, if the lake/channel system proposed as part of Tract Map 31229 is not in place. The interim earthen channel will be part of the future MDP/ADP in order to provide upstream property owners the potential to construct a system that will connect to the existing lake west of Southshore Drive.
2. The relocation of three high pressure gas lines that are 16", 24", and 30" in diameter for the installation of the box culvert crossing Briggs Road.
3. A trapezoidal earthen channel (Holland Channel) with a length of 5,400 feet that extends from Briggs Road to Leon Road. The channel will have an average bottom width of 100 feet and average depth of 8.5 feet. The channel will implement 4:1 side slopes, a

concrete low flow channel, and two access roads resulting a total approximate width of 250 feet. This channel will require 230,000 cubic yards of material to be excavated.

4. Two (2) 14' by 7' reinforced concrete box culverts cross Leon Road, one is 450-feet long and the other is 300-feet long.
5. A trapezoidal earthen channel (Line A) with a length of 3,300 feet that extends from Leon Road at the downstream terminus will extend in a southeasterly direction toward the intersection of Craig Avenue and Eucalyptus Road. The channel will have an average bottom width of 50 feet and average depth of 7 feet. The channel will implement 4:1 side slopes, a concrete low flow channel, and two access roads resulting in a total approximate width of 146 feet. This channel will require 67,000 cubic yards of material to be excavated.
6. Two 8' by 6' RCB culverts 200-feet in length extend from Line A and cross Eucalyptus Road to intercept offsite flows from the southeasterly part of the watershed area. Two 48" RCP storm drains are proposed to collect flows near Craig Avenue and Eucalyptus Road and connect to the RCB.
7. A trapezoidal earthen channel (Line B) 1,100 feet in length extends north from the proposed Holland Channel at Leon Road adjacent to the easterly right-of-way of Leon Road. The channel's downstream terminus will begin at Leon Road and extend to the north side of Holland Road. The channel will have an average bottom width of 30 feet and average depth of 7 feet. The channel will implement 4:1 side slopes, a concrete low flow channel, and two access roads. This channel will require 17,000 cubic yards of material to be excavated.
8. A 1,000-foot long 84" RCP that extends from the proposed Line A Channel north along Eucalyptus Road is proposed in order to intercept offsite flows from a watershed area that extend northeasterly of the Eucalyptus Road Holland Road intersection.
9. A 2,000-foot long 54" RCP extending from the RCB crossing Leon Road toward will be required to intercept the offsite flows from a watershed area southeast of the Leon Road and Craig Avenue intersection. The storm drain will be located within Leon Road and extend 900 feet east along Craig Avenue.
10. A 200-foot long double 8' x 6' RCB extending north from the proposed Line B Channel and crossing Holland Road. The culvert will intercept the offsite flows northwest of the Leon Road and Holland Road intersection.

The flood control facilities proposed for the Project are for the purpose of public safety and flood protection for the area. Periodic maintenance of the flood control facilities is required in order to restore the facility to the original hydraulic conveyance, designed lines and grades. Standard maintenance activities will include sediment removal, vegetation management, erosion repair to access roads and side slopes. In addition to mowing or the use of other machinery, vegetation may also be managed by application of aquatic herbicides/pesticides or hand removal, if necessary. Typical machinery used to conduct maintenance activities includes graders, loaders, and/or long reach excavators that may require use of various attachments. Erosion along the side slopes and access road of the channel can usually be repaired by rolling and re-compacting the area with a loader or long reach excavator. Sediment removal is usually done through the use of a loader operating in the bottom of the channel or basin, or by using an excavator to remove sediment while working from an access roads or bank. Vegetation removal is typically done on an as needed basis once or twice a year, in order to maintain the designed hydraulic capacity. Slope repair and restoring lines and grades usually occurs on an as needed basis, but less frequently than vegetation removal.

The proposed channels are not within areas that are currently under limits of environmental jurisdiction; as a result, permitting to construct the channel are not required. Prior to

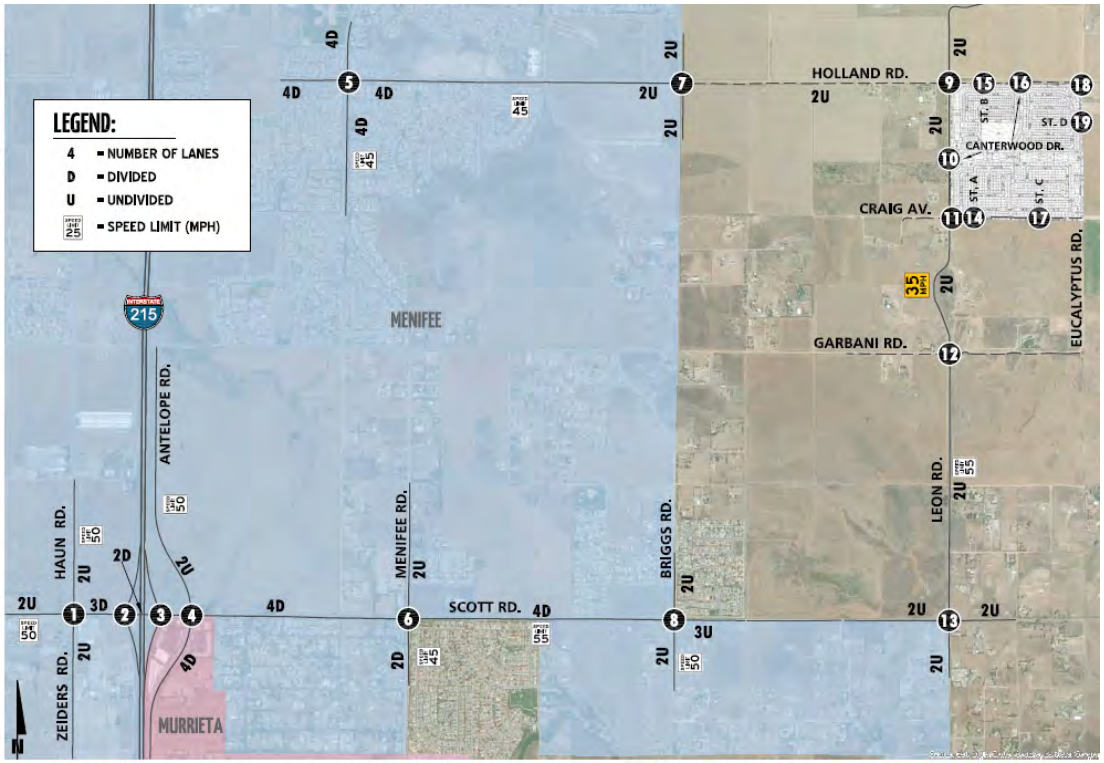
relinquishing the ownership and maintenance of the channel, the Project will meet the obligation outlined in the RCFC&WCD cooperative agreement for the channel system, including obtaining any permits necessary to operate and maintain the flood control facilities.

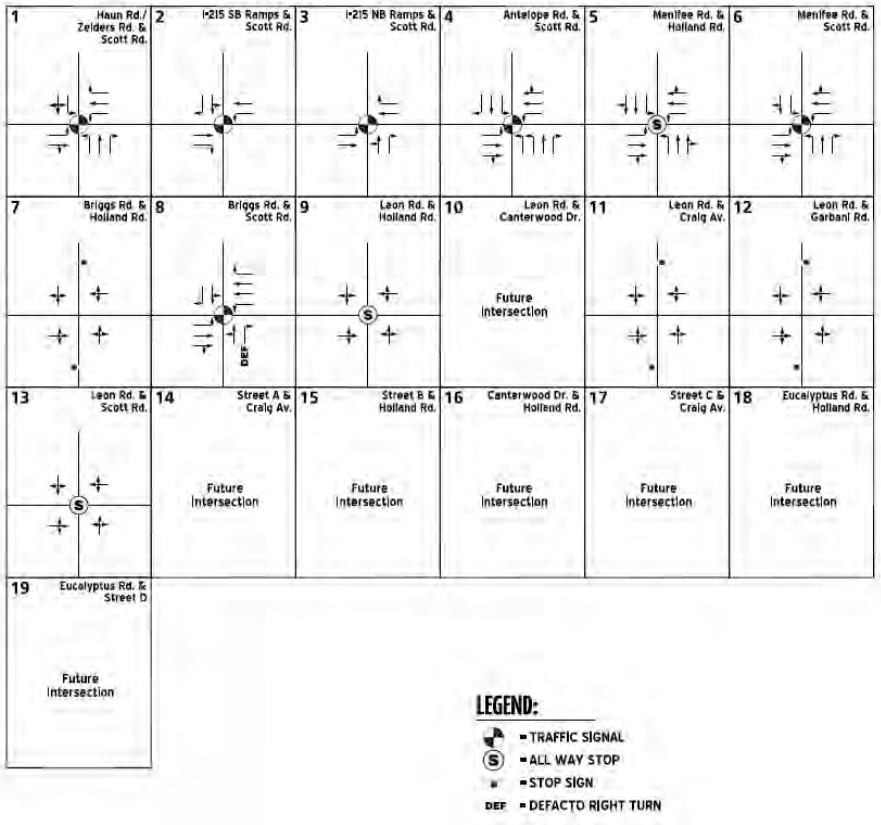
3.4.4 Circulation

Circulation design features will include traditional roadways for vehicular movement and trails for bicycle and pedestrian use oriented in such a way that residents and emergency vehicles both can access the Project area efficiently and safely and once arrived will be able to flow through the community.

Following are descriptions of the Riverside County General Plan Roadway Network, existing conditions and proposed improvements for the Project. Reference **Figure 3-5, *Existing Number of Through Lanes and Intersection Controls***, and **Figure 3-6, *Riverside County General Plan Roadway Network***.

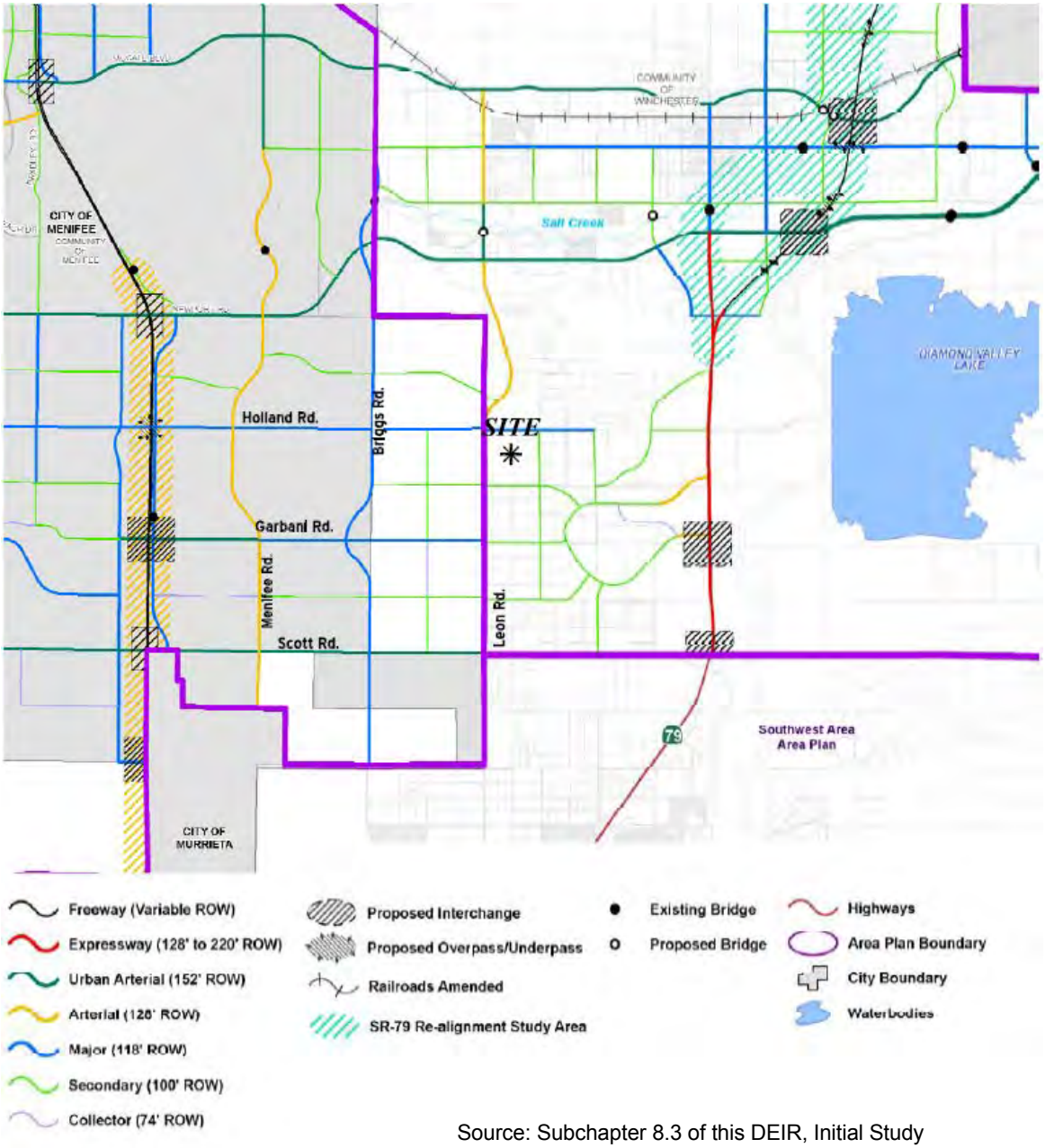
FIGURE 3-5
EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS





Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-6
RIVERSIDE COUNTY GENERAL PLAN ROADWAY NETWORK



Source: Subchapter 8.3 of this DEIR, Initial Study

3.4.4.1 Holland Road

Holland Road is classified as a "Major Highway" on the Riverside County General Plan Roadway Network. According to **Figure 3-7, *Riverside County General Plan Roadway Cross-Sections***, a Major Highway is a 4-lane roadway with a 118' ROW, a 76' wide roadway, a 12' wide painted median, with a 21' wide parkway on both sides of the roadway. Currently, Holland Road is a 2-lane, unimproved, undivided roadway, adjacent to the Residential Project Site Components and the Off-Site Project Components. Holland Road currently has an existing 60' ROW. The Project proposes to dedicate an additional 29' adjacent to the Residential Project Site Components (between Eucalyptus and Leon Roads). Project improvement would include an additional 8' of pavement, 6" curb, and a 21' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 3-8*, Holland/Leon Road (Residential Project Site Component)***. Holland Road will be improved to 32' of pavement between Leon Road and Briggs Road. An AC berm (either regular or rolled) shall be installed to control drainage. No curb, gutter, sidewalks or streetlights shall be installed along this segment of improvements.

3.4.4.2 Leon Road

Leon Road is classified as an "Arterial Highway" on the Riverside County General Plan Roadway Network. According to **Figure 3-7**, Arterial Highway is a 4-lane roadway with a 128' ROW, an 86' wide roadway, an 18' wide curbed median, with a 21' wide parkway on both sides of the roadway.

Currently, Leon Road is a 2-lane, improved, undivided roadway, adjacent to the Residential Project site component. Leon Road currently has an existing 60' ROW. The Project proposes to dedicate an additional 29' adjacent to the Residential Project site components between Eucalyptus and Leon Roads. Project improvements would include an additional 8' of pavement, 6" curb, and a 21' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 3-8**, ***Holland/Leon Road (Residential Project Site Component)***.

3.4.4.3 Craig Avenue

Craig Avenue is classified as a "Secondary Highway" on the Riverside County General Plan Roadway Network. According to **Figure 3-7**, a Secondary Highway is a 4-lane roadway with a 100' ROW, a 64' wide roadway, no median, with an 18' wide parkway on both sides of the roadway.

Currently, Craig Avenue is a 2-lane, unimproved, undivided roadway, adjacent to the Residential Project Site Component. Craig Avenue currently has an existing 44' ROW. The Project proposes to dedicate an additional 60' adjacent to the Residential Project Site Components (between Eucalyptus and Leon Roads). Project improvement would include an additional 32' of pavement, 6" curb, and an 18' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 3-9*, Craig Avenue***.

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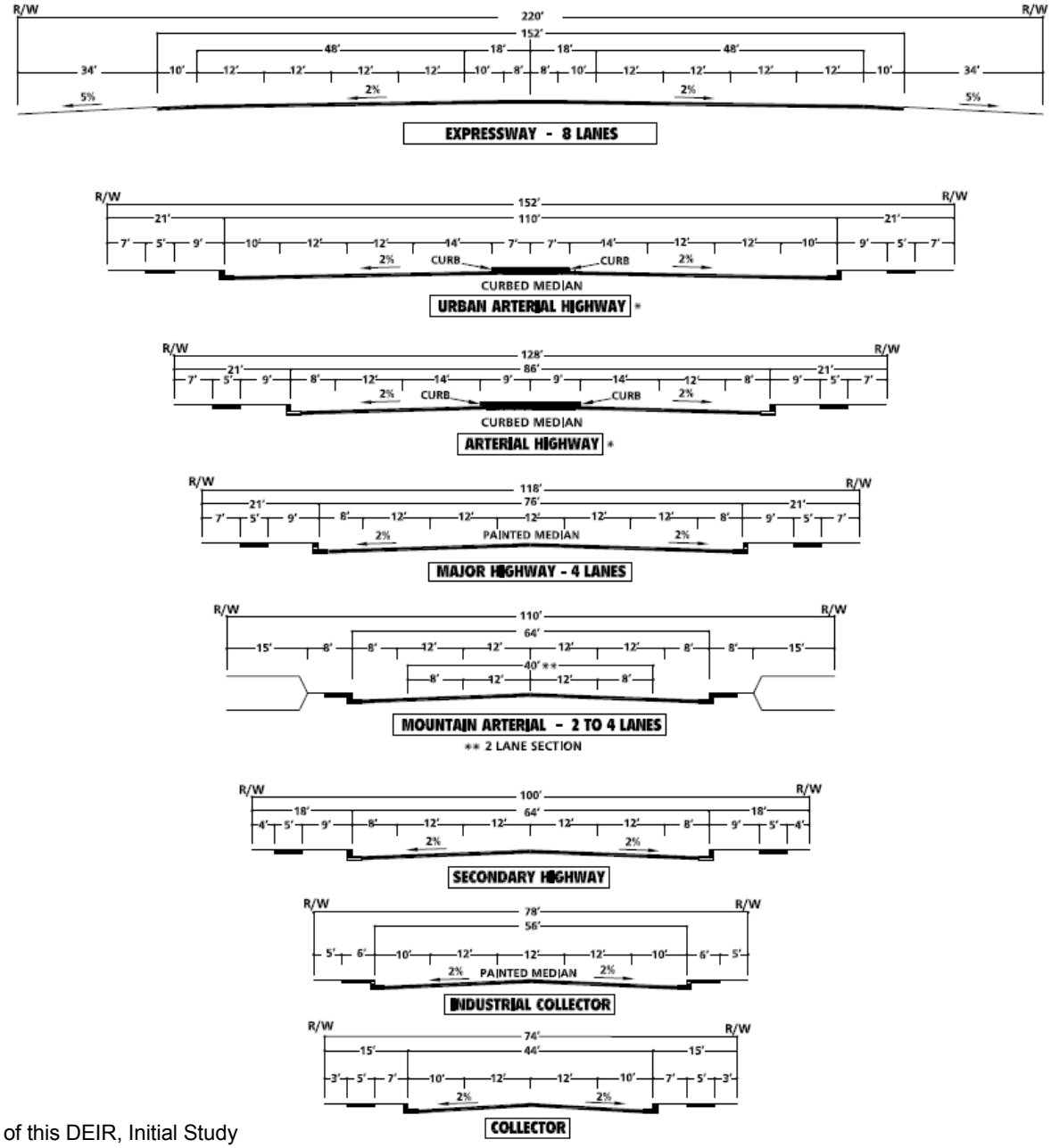
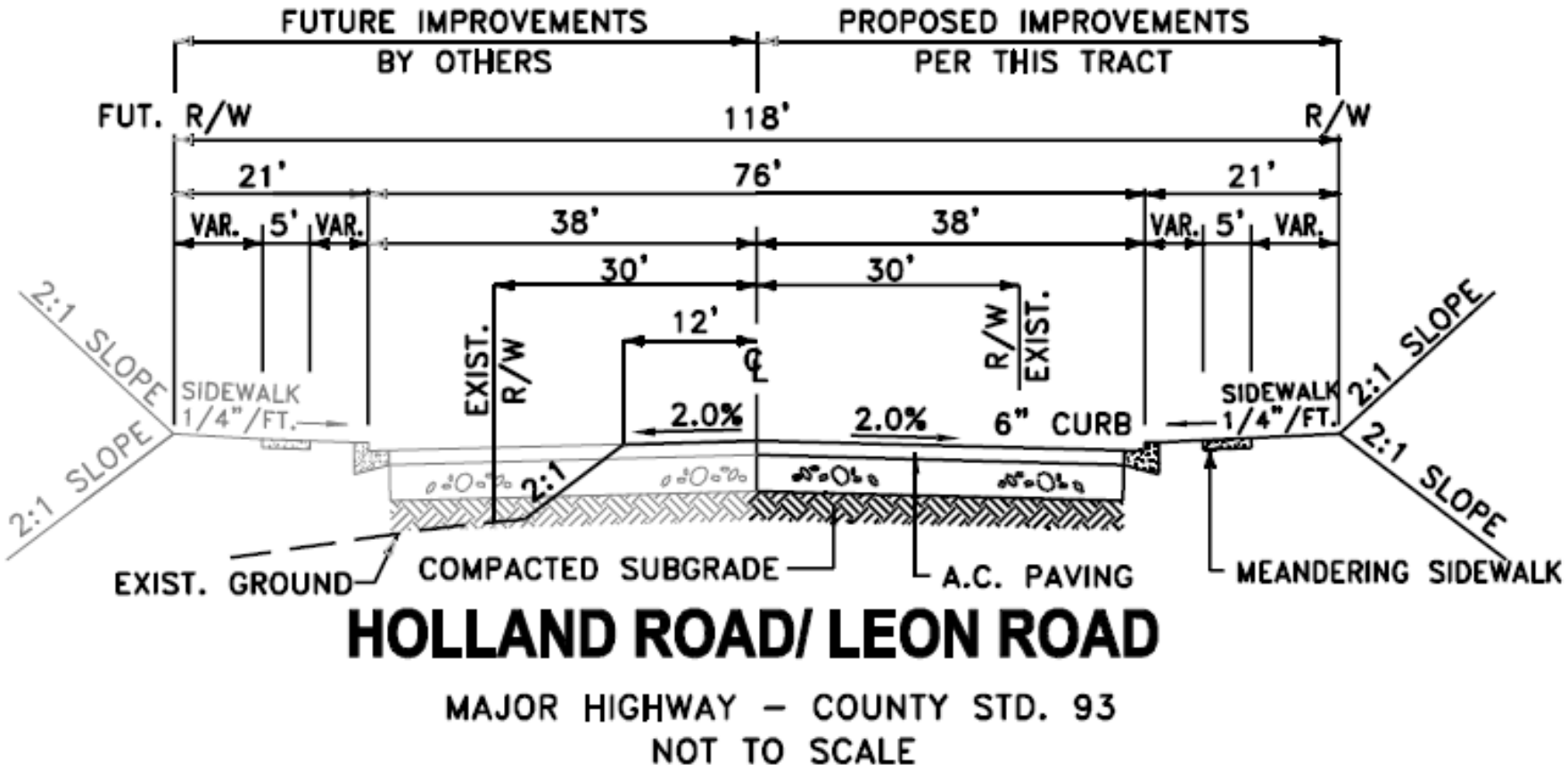
FIGURE 3-7
RIVERSIDE COUNTY GENERAL PLAN ROADWAY CROSS-SECTIONS



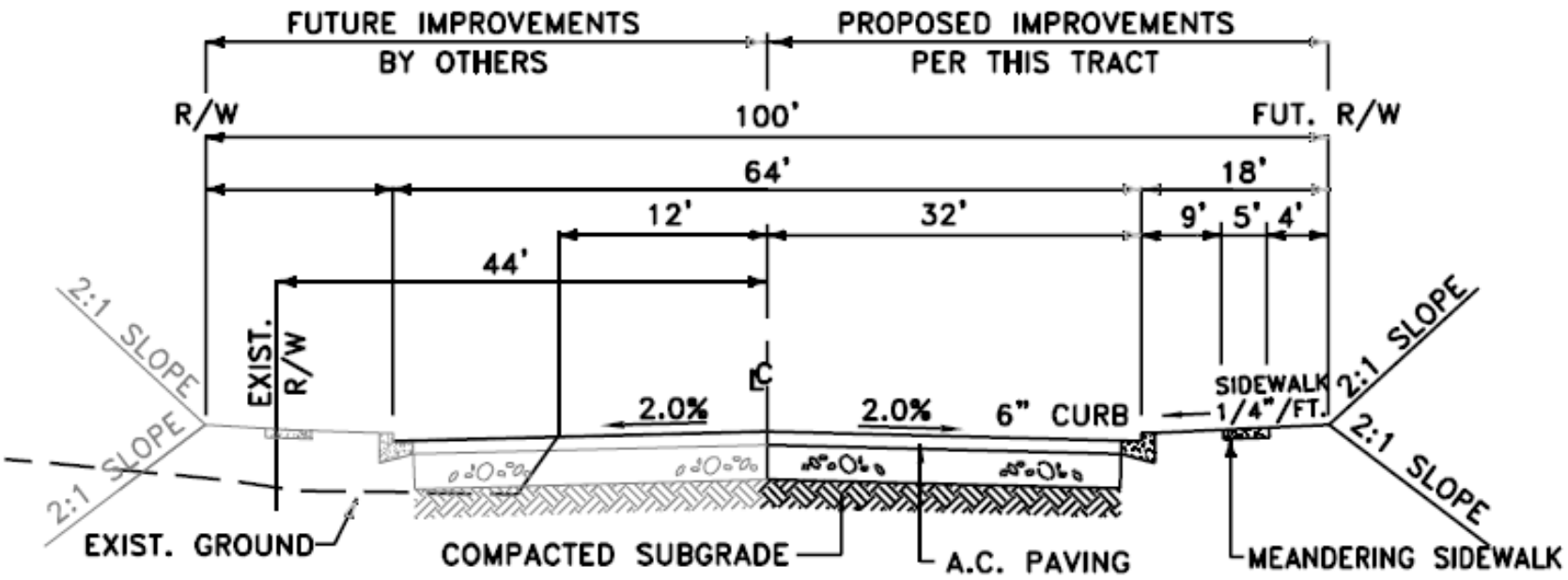
Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-8
HOLLAND/LEON ROAD (RESIDENTIAL PROJECT SITE COMPONENT)



Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-9
CRAIG AVENUE



CRAIG AVE..

SECONDARY HIGHWAY – COUNTY STD. 94
NOT TO SCALE

Source: Subchapter 8.3 of this DEIR, Initial Study

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3.4.4.4 Eucalyptus Road

Eucalyptus Road is classified as a "Secondary Highway" on the Riverside County General Plan Roadway Network. According to **Figure 3-7, *Riverside County General Plan Roadway Cross Sections***, a Secondary Highway is a 4-lane roadway with a 100' ROW, a 64' wide roadway, no median, with an 18' wide parkway on both sides of the roadway.

Currently, Eucalyptus Road is a 2-lane, unimproved, undivided roadway, adjacent to the Residential Project Site Component. Eucalyptus Road currently has an existing 44' ROW. The Project proposes to dedicate an additional 50' adjacent to the Residential Project Site Components (between Craig and Briggs Roads). Project improvement would include a 32' of pavement, no median, a 6" curb, and an 18' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 3-10*, Eucalyptus Road***.

3.4.4.5 On-Site - Internal Roadways

The proposed Project provides a hierarchy of roadways on-site. Streets "A" and "B" provide the main ingress and egress for the Project from the adjacent roadways, Leon Road and Holland Road. Additional ingress and egress for the Project is provided via internal streets accessing Craig Avenue and Eucalyptus Road. Streets "C" and "D" provide access to the community park. All remaining streets ("E" – "Z" and "YY" and "ZZ") take access from Streets "A" and "B." In addition, the entrances to Streets "A," "B," "M," "T," "Y," and "YY" will be modified as described below:

Streets "A" and "B" will have a 74' ROW, 44' of pavement, 6" curb, and an 11' wide parkway with a 5' wide sidewalk that is separated from the curb by the parkway. Reference **Figure 3-11**, ***Streets "A" and "B"***.

Streets "C" and "D" will have a 66' ROW, 44' of pavement, 6" curb, and a 15' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 3-12**, ***Streets "C" and "D"***.

Streets "D" – "Z" and "ZZ" and "YY" will have a 56' ROW, 36' of pavement, a 6" curb, and a 10' wide parkway with a 5' wide sidewalk that is separated from the curb by the parkway. Reference **Figure 3-13**, ***Streets "D" – "Z" and "ZZ" and "YY"***.

Entrances to Streets "A," "B," "M," "T," "Y," and "YY" will have an 80' ROW, 40' of pavement, a 10' wide curbed median, a 6" curb, and a 15' wide parkway with a 5' wide sidewalk that is separated from the curb by the parkway. Reference **Figure 3-14**, ***Entrances to Streets "A," "B," "M," "T," "Y," and "YY"***.

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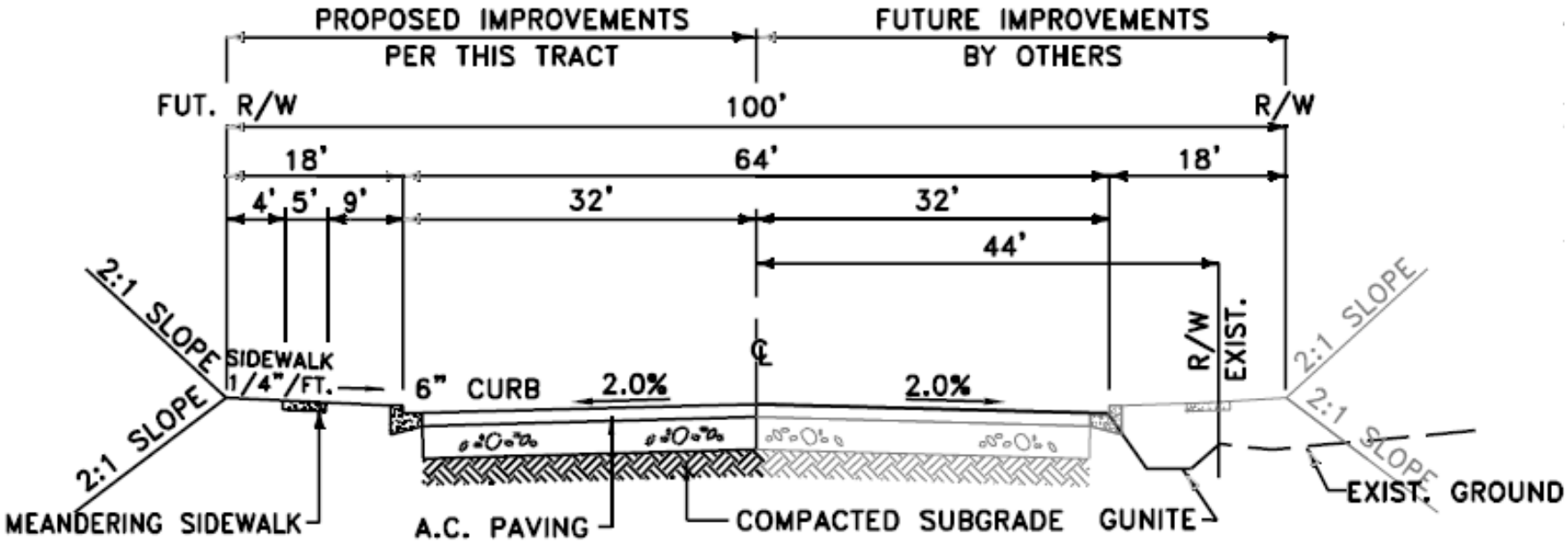
FIGURE 3-10
EUCALYPTUS ROAD

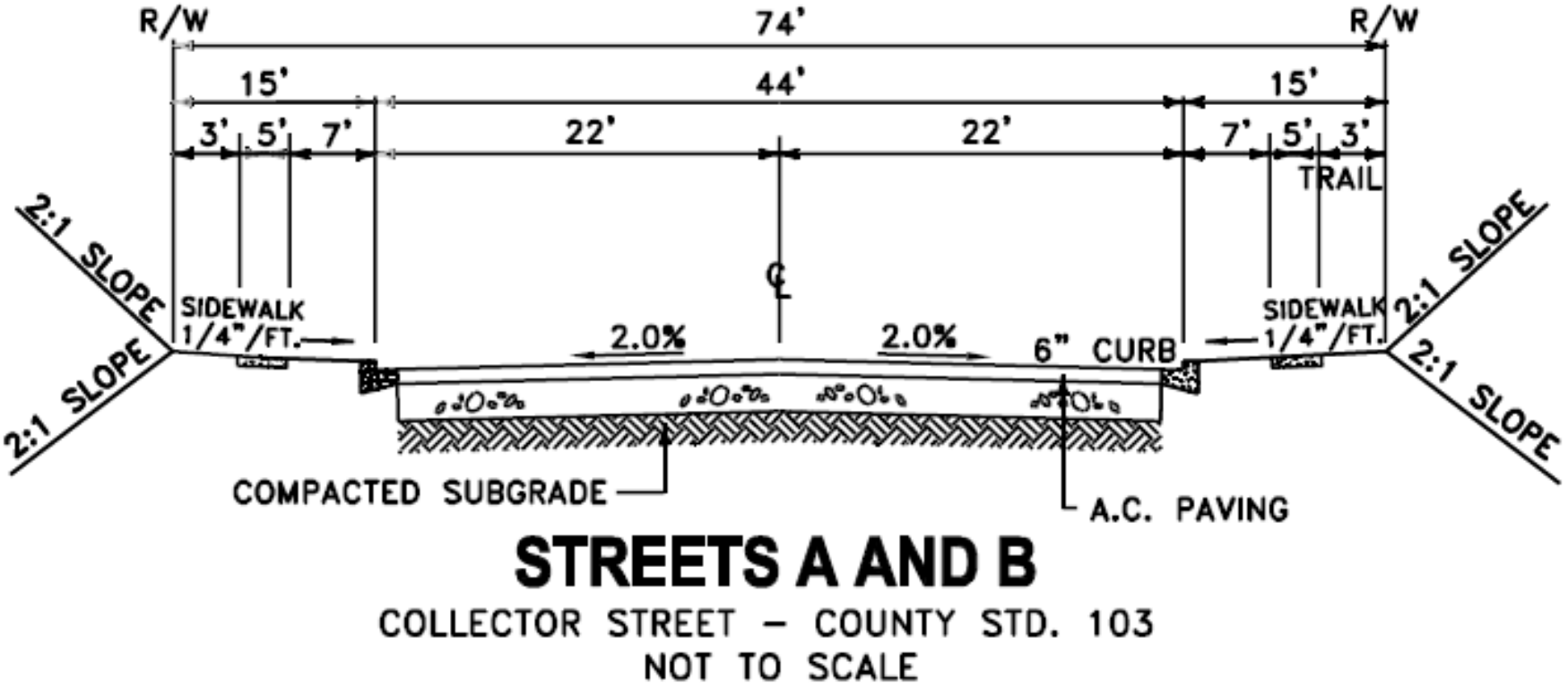


EUCALYPTUS ROAD

SECONDARY HIGHWAY – COUNTY STD. 94
NOT TO SCALE

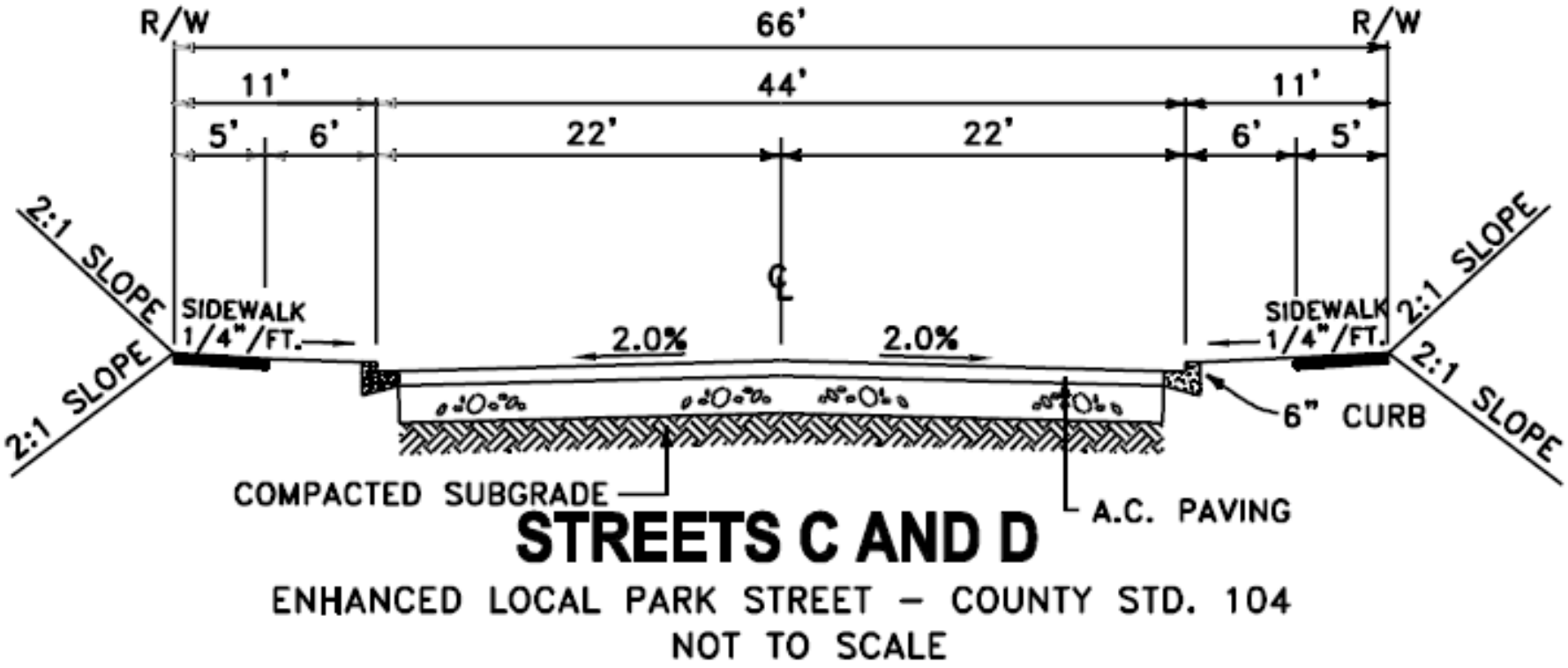
Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-11
STREETS "A" AND "B"



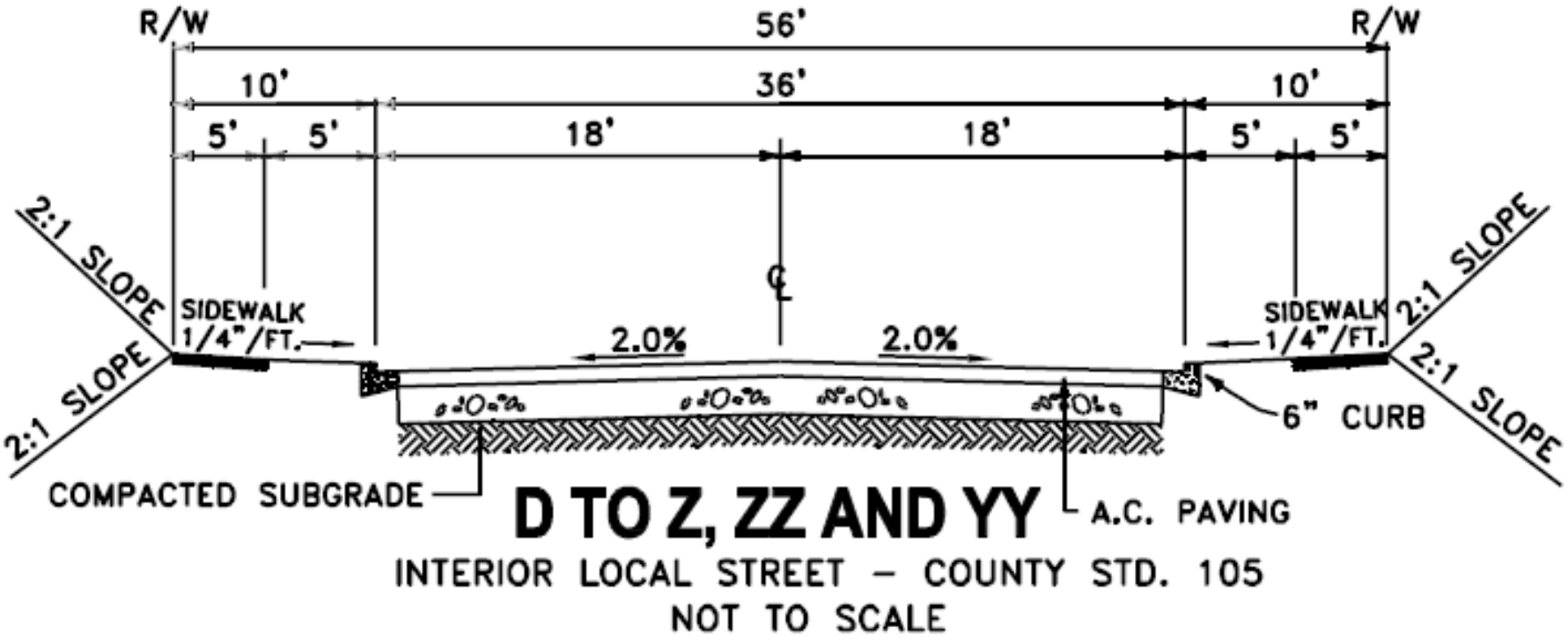
Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-12
STREETS "C" AND "D"



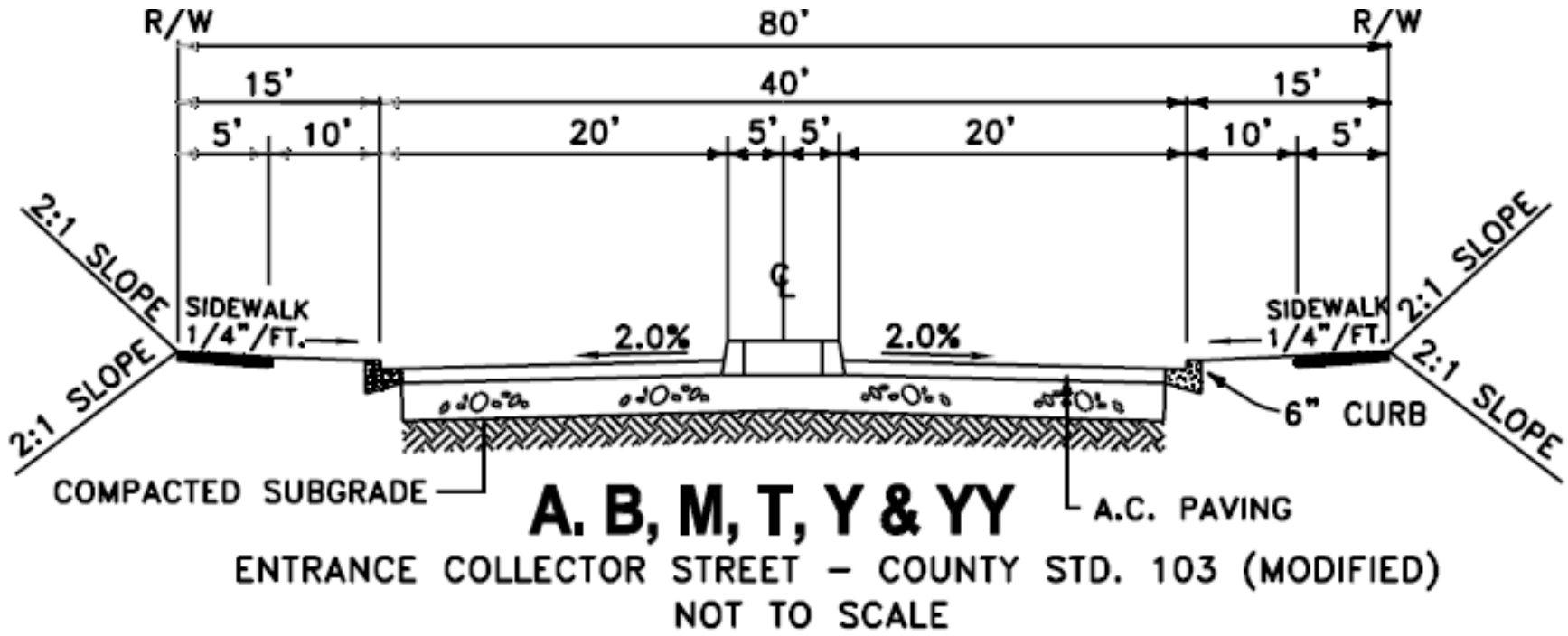
Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-13
STREETS "D" – "Z" AND "ZZ" AND "YY"



Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-14
ENTRANCES TO STREETS "A," "B," "M," "T," "Y," AND "YY"



Source: Subchapter 8.3 of this DEIR, Initial Study

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Alternative modes of transportation include sidewalks, trails, paseos and transit. Sidewalks, trails, and paseos are described above in Subsection 3.4.3, above. Drainage Channels (Lots 577, 581, and 588) will be flanked on either side by a 16' wide maintenance road/hiking trail. The proposed maintenance road and hiking trails will be maintained by the Community Facilities District (CFD). Sidewalks will be provided along all Project streets, as well as within the paseos. A "Regional Trail: Urban/Suburban" will be installed along both Holland and Eucalyptus Roads along the Residential Project site frontage. This is a 20'-wide (minimum) section, located outside of the ROW, with a 4'-wide (minimum) buffer separated from a 10'-wide (minimum) trail by a 48" high (minimum) split rail PVC fence; with another 2'-wide (minimum) buffer. The minimum overhead clearance shall be 12'. The trail will be a minimum 6" thick layer of decomposed granite. Reference **Figure 3-15**, ***Regional Trail: Urban/Suburban***.

Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic.

Riverside Transit Agency (RTA) provides bus services along Antelope Road, Menifee Road and Scott Road via Route 61. RTA Route 208 has services along the I-215 Freeway. At the current time, there are no existing transit routes that could potentially serve the Project. Transit service is reviewed and updated by the RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments, which may lead to either enhanced or reduced service where appropriate.

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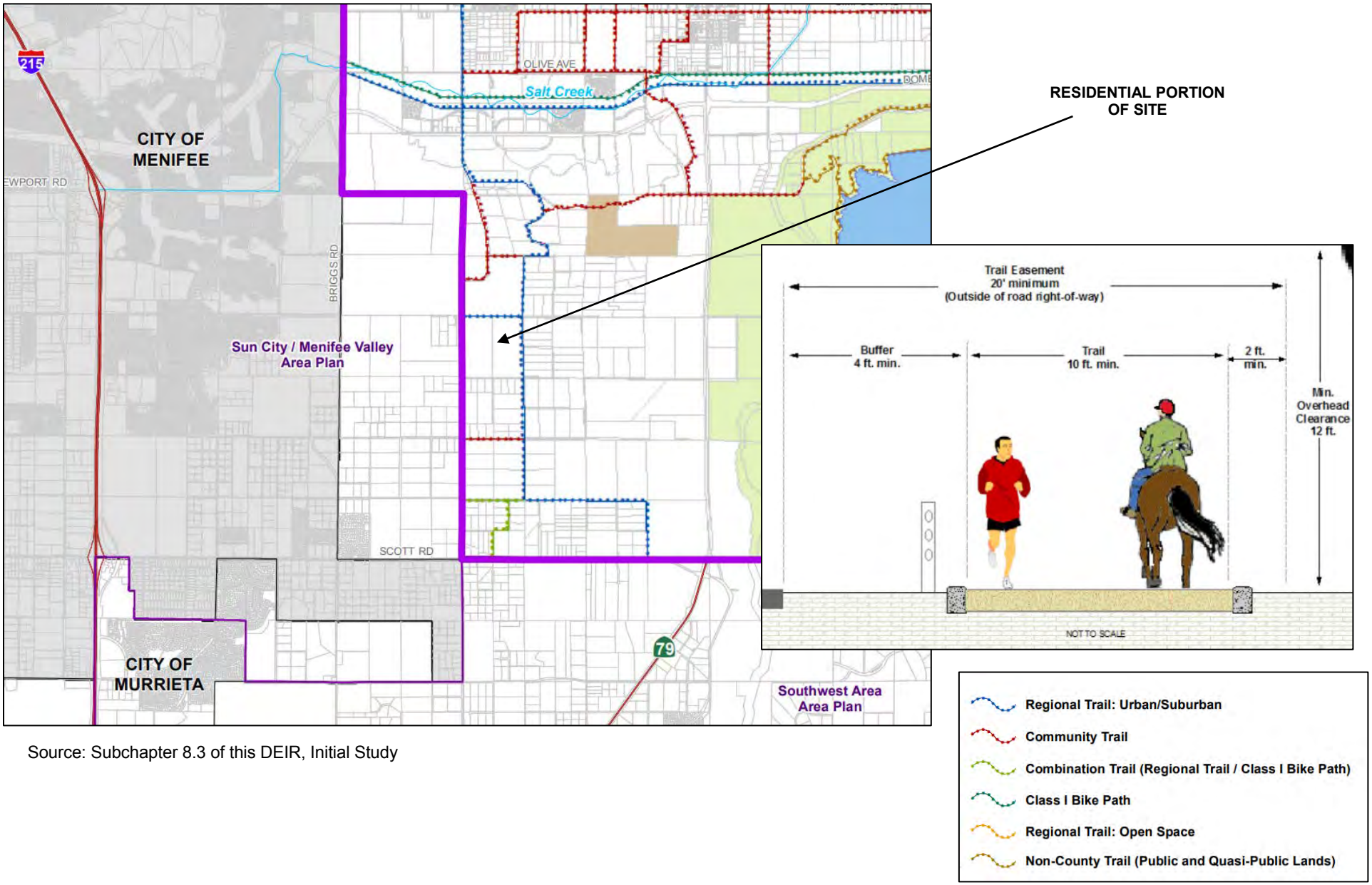
FIGURE 3-15
REGIONAL TRAIL: URBAN/SUBURBAN



Source: Subchapter 8.3 of this DEIR, Initial Study

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3.4.5 Grading and Drainage

3.4.5.1 Project Grading

The Project rough grading will involve approximately 175,811 cubic yards (CY) of cut and 418,339 CY of fill. Lot spoil dirt from house foundations, wall footings, driveways, and utilities will generate approximately 72,000 CY of cut. Excavation to create the off-site Holland Channel will generate the remaining 170,528 CY of dirt needed to balance the site.

The site currently ranges in elevation from approximately 1,434 feet AMSL on the western side of the Project site to 1,445 AMSL in the northeastern corner of the site.

When graded, the Project will range in elevation from a high of 1,447 AMSL at the intersection of Holland Road and Eucalyptus Road to a low elevation of 1,427 AMSL at the bottom of the Holland Channel where it crosses Leon Road. This demonstrates that the range of site elevation variations will widen from 11' to 20' to facilitate the development of the Project. In order to accomplish this, graded slopes will be utilized to form the graded drainage channel that traverses the central and southeastern portions of the site. Perimeter streets on all four sides will match the grade of surrounding properties and projects. Reference **Figure 3-16**, ***TTM 37439 Conceptual Grading Plan***.

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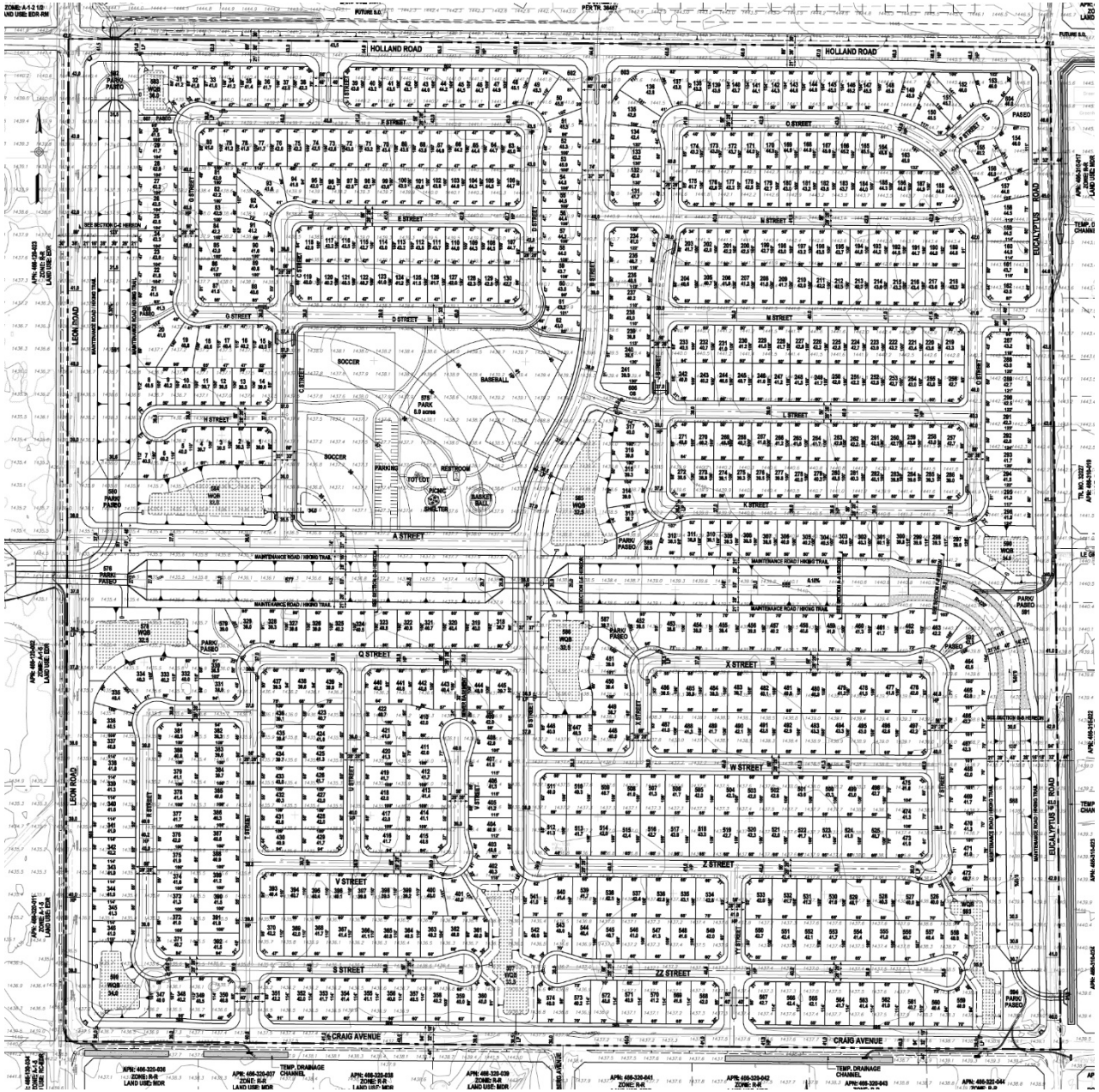
FIGURE 3-16
TTM 37439 CONCEPTUAL GRADING PLAN



Source: Subchapter 8.3 of this DEIR, Initial Study

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As described previously and as shown on **Figure 2-4**, ***Menifee-Holland ADP Ultimate Flood Control Drainage System***, provided previously in Chapter 2 of this DEIR***,*** the Project will construct a total of three regional flood control trapezoidal earthen channels (i.e. Holland Channel, Line A, and Line B) and roadway culverts that are expected to be included as part of a future MDP and ADP to be prepared by Riverside County Flood Control and Water Conservation District. The earthen trapezoidal channels within the Project limits (Lines A and B) will discharge via an underground reinforced concrete box (RCB) culvert crossing Leon Road to an offsite earthen trapezoidal channel (Holland Channel) that will extend from Leon Road and connect to a proposed RCB culvert crossing Briggs Road. Moreover, subsurface storm drain systems are required along Craig Avenue, Eucalyptus Road, Leon Road, and Holland Road to collect local drainage and provide flood protection for the proposed street improvements. The subsurface storm drain systems will not be part of the MDP/ADP.

The proposed culvert, which is a five barrel 14' wide x 8.5' high reinforced concrete box, crosses Briggs Road and discharges into the Lake/Channel system within approved Tentative Tract 31229. Tentative Tract 31229, which has been approved by the County and by the City of Menifee, will construct a private lake/channel system that will accept flows from the proposed culvert. The private lake varies in width from 150 feet to 425 feet. However, if TTM 31229 is not in place when TTM 37439 commences construction, an interim earthen channel will be constructed to ensure runoff is conveyed to the existing culverts crossing Southshore Drive.

As part of this proposed Project, TTM 37439 will construct the proposed regional flood control channels including the trapezoidal earthen channels and RCB/RCP systems shown on **Figure 2-4**. Three total regional trapezoidal earthen channels (i.e. Holland Channel, Line A and Line B) require construction as part of TTM 37439. The three channels are approximately 9,800' in length and construction will require approximately 314,000 cubic yards of excavation. The trapezoidal earthen channels will have 4:1 side slopes, a concrete low flow channel, depths varying from 6'-8', and a bottom width that varies from 30' to 100'.

The Project will also require off-site grading for the sewer lift station, which will create a level pad, approximately 160' wide by 130' long. The overall grading footprint, including perimeter slopes, will be approximately 230' wide and 160' long. The proposed grading will involve fill thicknesses ranging from 0' to 15' and approximately 6,500 cubic yards of fill, which will be trucked in from the Project site.

Off-site grading associated with street improvements for Holland Road, between Leon Road and Briggs Road, will involve minor street grading (cut or fill thicknesses less than 2') for a graded width of approximately 58' and a length of 5,275'. Overall earthwork volume is estimated to be 6,000 CY, which will also be trucked in from the Project site.

3.4.5.2 Drainage / Hydrology / Water Quality

The Project will construct two large channels that will traverse the Project, as well as subsurface storm drain and bioretention basins. The bioretention basins will treat for water quality purposes and discharge directly into one of the two channels. The Project site is not required to address the hydrologic conditions of concern (HCOC) or mitigate for increased runoff since the Project will construct the Holland Channel from Eucalyptus Avenue to Southshore Drive (which has an existing culvert that discharges into private lakes and ultimately to Salt Creek).

The Project site will construct the proposed Holland Channel (designated as Line A through the Project site) and Line B. The Holland Channel will be constructed from Eucalyptus Avenue to

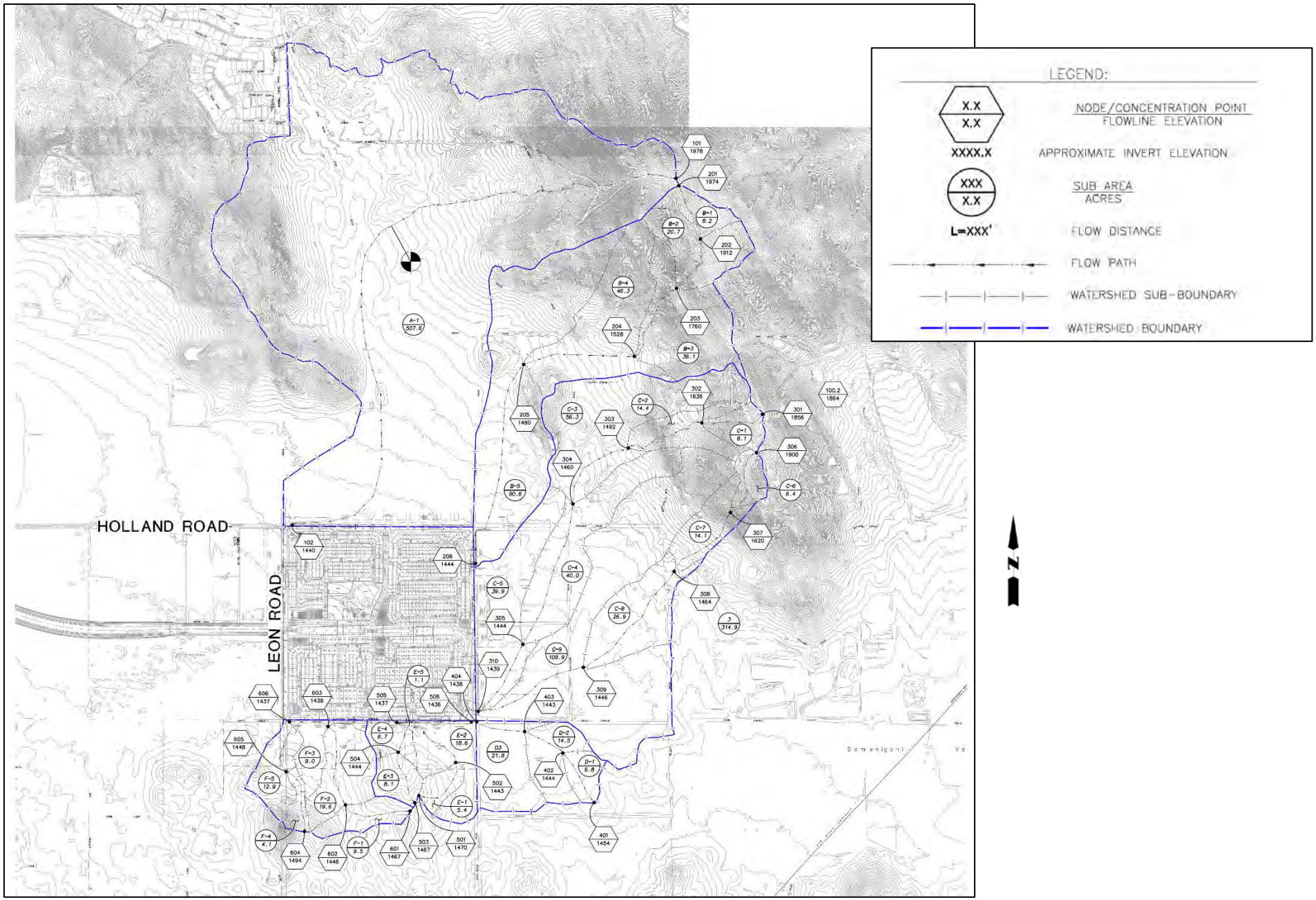
the existing culvert at Southshore Drive. This system will be a combination of box culverts and open channels that will be engineered, earthen channels with a low flow concrete channel. The drainage system will be maintained by RCFC&WCD. This system will discharge into a system that is designated as exempt from addressing the HCOC per the Riverside County Stormwater & Water Conservation Tracking Tool (http://rivco.permitrack.com/). Therefore, since the Project is proposing to extend the Holland Channel (a facility that is engineered and maintained) to the Project site, the proposed Project will not create a hydrologic condition of concern.

The proposed Project site is relatively flat, with the main channel having slopes of 0.1% to 0.3% throughout the Project site. Due to the vertical constraints, the bioretention basins were limited to 18" of soil media, and the majority of the storm drain systems have slopes of 0.3%.

The off-site hydrology analysis utilized the ultimate condition land use to perform the analysis, since these flow rates would be used for the design of the Line A (Holland Channel) and Line B channel infrastructure systems. The offsite area consists of 6 watershed areas designated as Areas "A" through "F". Reference **Figure 3-17**, ***Ultimate Condition Off-Site Hydrology Map***. The post-Project condition onsite rational method hydrology analysis was performed for the 9 watershed areas, designated as areas "A" through "I". Areas "A" through "I" are the in-tract areas that include the half-street improvements within the perimeter streets surrounding the residential development. The area designations correspond to the downstream tributary basin. The rational method analysis utilized condominium land use (65% impervious) for the Project based upon the average lot sizes, and the basin areas were analyzed as 100% pervious. Reference **Figure 3-18**, ***Post Project Condition – On-Site Hydrology Map***.

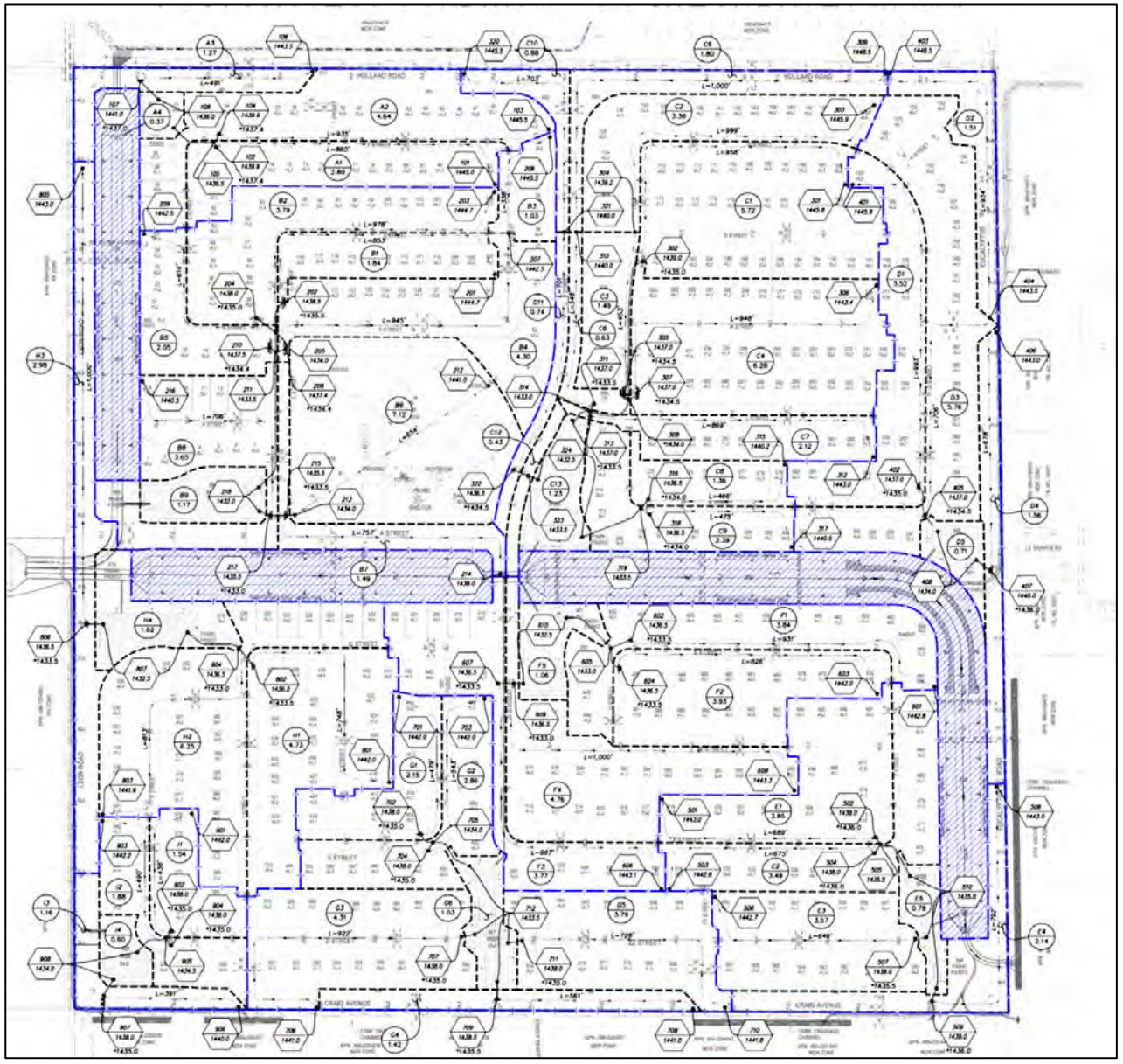
The proposed Project will construct subsurface storm drain that will connect to two main channels traversing the Project site. During the preliminary stages, only the main channels (Lines A and B) include Water Surface Profile Gradient Program calculations. The remaining storm drain systems utilize friction slope calculations to size the systems. Systems connecting to Lines A and B utilize downstream water surface elevations obtained from the WSPG calculations. Systems discharging into the onsite basins utilize the 100-year water surface elevations determined by the basin outlet sizing calculations. The laterals utilize the water surface elevations determined by the mainline friction slope calculations. Reference **Figure 3-19**, ***Drainage Facilities Map***.

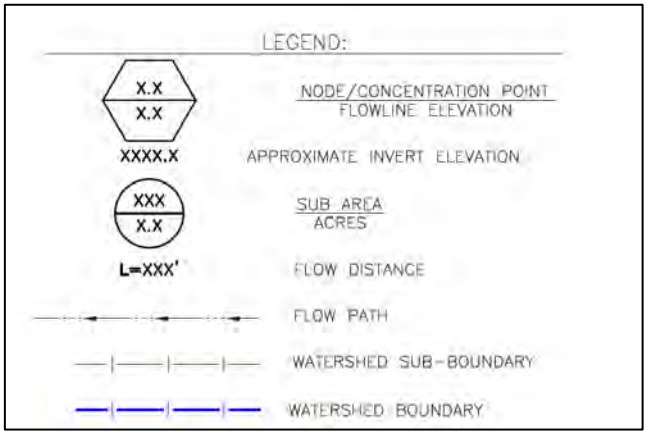
FIGURE 3-17
ULTIMATE CONDITION OFF-SITE HYDROLOGY MAP



Source: Subchapter 8.3 of this DEIR, Initial Study

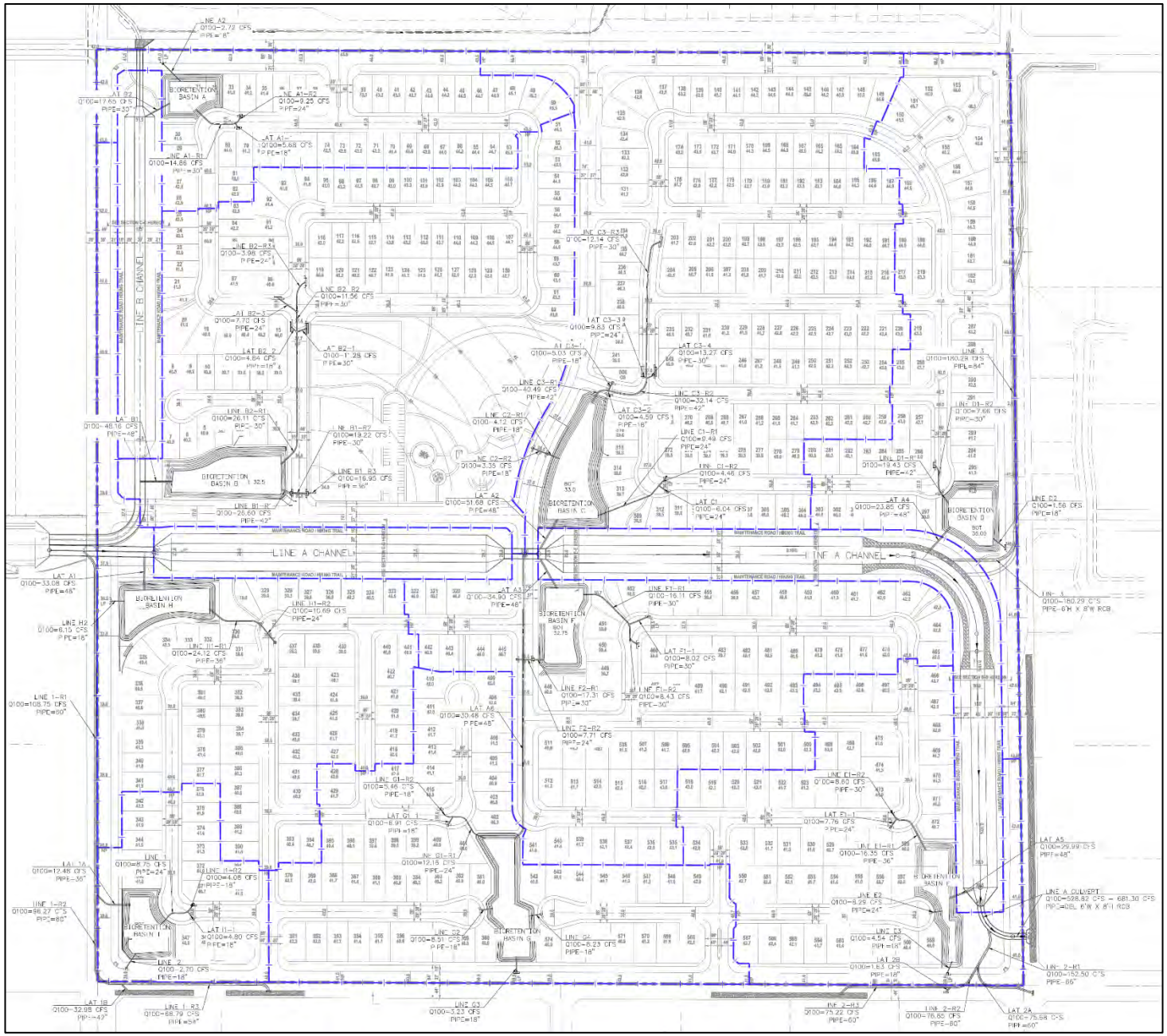
FIGURE 3-18
POST PROJECT CONDITION – ON-SITE HYDROLOGY MAP





Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 3-19
DRAINAGE FACILITIES MAP



Source: Subchapter 8.3 of this DEIR, Initial Study

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In addition to the Line A and Line B system, which are expected to be incorporated into a future MDP/ADP, three drainage system systems are required to collect offsite flows that enter the proposed Project. These facilities will not be part of the future MDP/ADP and have been designated as Lines 1, 2 and 3.

Line 1 connects to the double box system crossing Leon Road (Line A). It collects flows from Basin I, as well as the offsite area tributary to the south east corner of the Leon Road and Craig Avenue Intersection. The system ranges from 54" – 60", with a peak flow rate of 109 cubic feet per second (ft^3/s).

The Line 2 and Line 2A system connects to Line A at the upstream end (to the double box culvert crossing Eucalyptus Road). The system collects flows tributary to the south side of Craig Avenue at the east and west intersections of Craig Avenue and Eucalyptus Road. The pipe size ranges from 60" – 66", with a peak flow rate of 153 ft^3/s.

The Line 3 system collects flows tributary to the north east side of Eucalyptus Avenue and connects to the trapezoidal channel of the Line A system. Line 3 consists of a 6' high x 8' wide box culvert and an 84" RCP storm drain, and has a peak flow rate of 180 ft^3/s. The upstream box culvert of the Line A system was also analyzed, since the preliminary WSPG for the Line A system ended at the transition of the trapezoidal channel to the box culvert. Therefore, a friction slope analysis was performed for the upstream box portion.

The onsite storm drain systems were analyzed starting with the basin outlet pipes. The upstream water surface elevation for the basin outlet pipes were used to determine the weir flow line elevation. This weir flow line elevation could not be lower than 0.5 feet above the top of soil media within the basin to ensure that the water quality volume did not bypass the bioretention treatment. The basin outlet structures were then sized for the 100-year flow rate (as determined by the rational method hydrology calculations). The preliminary outlet structures were sized using the weir equation, and a weir coefficient equal to 3. The ponded depth of the 100-year flow rate on the outlet weirs was utilized as the downstream water surface elevation for the storm drains discharging into the basins.

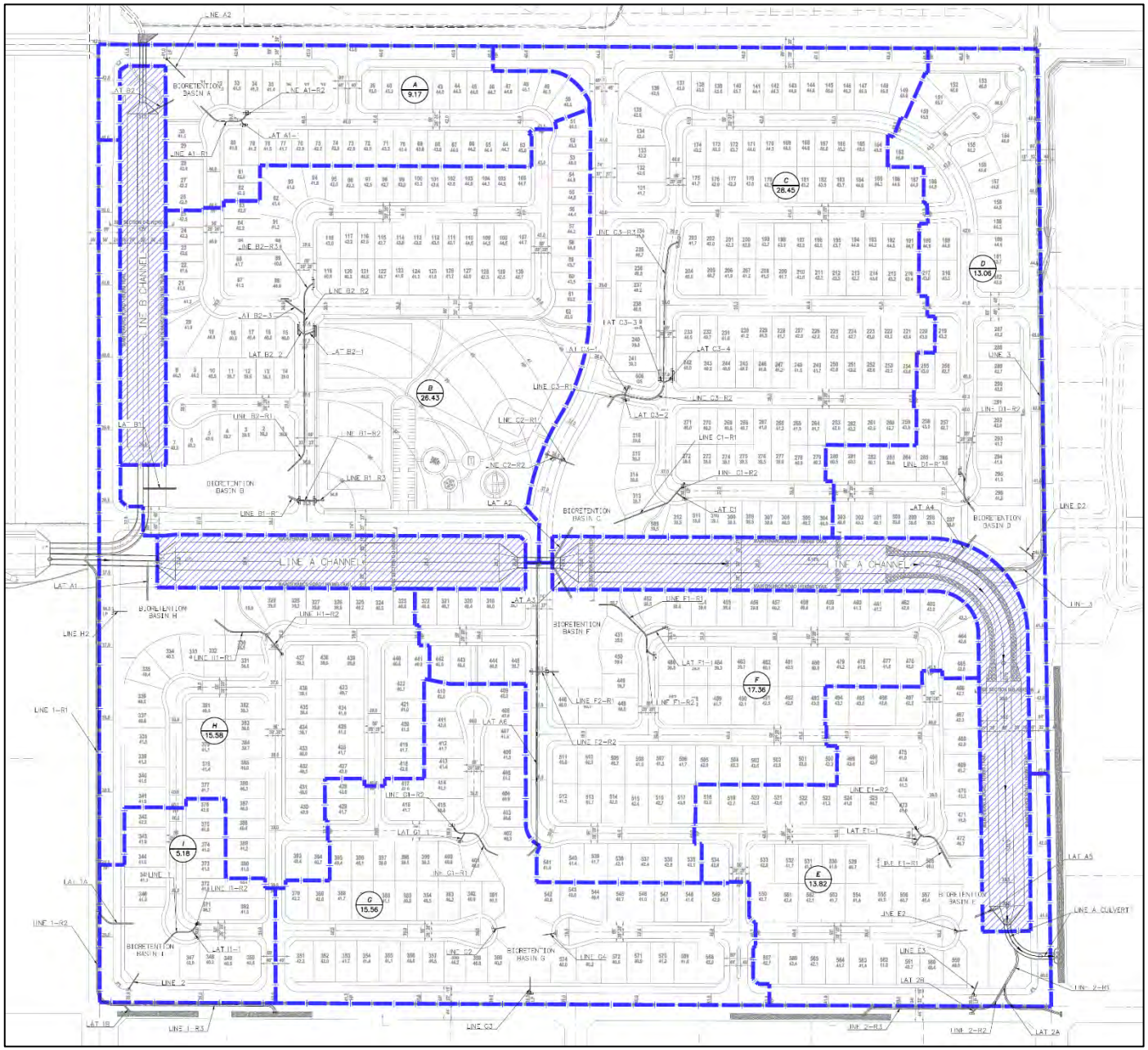
The proposed Project will utilize bioretention basins to treat for water quality purposes. **Figure 3-20**, ***WQMP Site Plan***. The required water quality volume was determined by using the Santa Ana Watershed Best Management Practices Design Volume Spreadsheets. The effective impervious fraction was calculated based upon the tributary land use designations.

The bioretention basins have been designed so that the water quality volume will not pond higher than 6" above the soil media using the Bioretention Basin Design Spreadsheets. Flows in excess of the water quality volume will be conveyed through outlet structures within the basins that incorporate weir structures with flow line inverts at 6" above the soil media. The Riverside County Bioretention Facility – Design Procedure worksheets were utilized to size the Bioretention Basins, however, the bioretention basins are not rectangular shaped bioretention basins but are irregular shaped so the top width is the average width of the basins. All the bioretention basins have 18" of soil media and a minimum 12" of gravel due to the vertical constraints associated with the channel elevations traversing the Project. The bio-retention basins proposed for the Project are to be maintained by the CFD that will be formed as part of the Project approval process.

All onsite flows will discharge into the proposed channels that will be a part of the future MDP/ADP that will be owned and operated by RCFC&WCD. These proposed channels

traverse the Project site and provide the area with regional flood protection.

FIGURE 3-20
WQMP SITE PLAN



Source: Subchapter 8.3 of this DEIR, Initial Study

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Since the proposed Project will be required to construct the proposed regional flood control channel to the existing lake system in Menifee, the Project will be exempt from addressing the 1 HCOC. This is a result of the proposed Project having flood control facilities that will be engineered and maintained systems from the Project site to Canyon Lake.

3.4.6 Utilities

All utilities and public services are currently available on, or adjacent to, the proposed Project site. Utility and Service providers are as follows:

- Electricity: Southern California Edison
- Water: Eastern Municipal Water District
- Sewer: Eastern Municipal Water District
- Cable: Time Warner Cable
- Gas: Southern California Gas
- Telephone: Verizon
- School: Menifee Valley Unified School District

Reference **Figure 3-16**, ***TTM 37439 Conceptual Grading Plan***, and *Map My County* (**Appendix A**).

3.4.7 Sewer and Water Facilities

Water service for potable residential use and fire service to the proposed Project will be provided by EMWD. The proposed Project is located entirely within the boundaries of EMWD, which serves approximately 785,000 residents and businesses. The District services seven local municipalities, portions of the County of Riverside, three water agencies, and eleven school districts, and receives approximately 75% of its water from Metropolitan Water District through its Colorado River Aqueduct and its connections to the State Water Project. The remaining 25% of EMWD's water comes from groundwater basins through groundwater wells.

Per Section 15206 of the State CEQA Guidelines, if a project has the potential for causing significant effects on the environment extending beyond the city or county in which the project would be located it is considered a project of statewide, regional or area wide significance. CEQA provides examples of the significant effects that a project could cause such as generating significant amounts of traffic or interfering with the attainment or maintenance of state or national air quality standards. Section 15206 explicitly identifies projects subject to this subdivision to include proposed residential developments of more than 500 dwelling units. The proposed Project includes more than 500 dwelling units and, therefore, it meets the criteria of statewide, regional, or area wide significance.

Water needs, determined from studies conducted for the Project, will dictate the size of infrastructure needed to handle the appropriate demands for the site.

The proposed Project will tie into an existing 48" EMWD water line in Leon Road and an existing 30" EMWD water line in Craig Avenue. 10,850 linear feet of sewer line, which will extend from Leon Road on the western boundary of the residential Project site, proceed 5,780' westerly within an EMWD easement to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW, finally proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the

City of Menifee. The EMWD sewer easement will be within the proposed Holland Channel and will require shared access within the future RCFC&WCD right-of-way.

The lift station would be constructed on an approximately 0.22-acre site. It is anticipated that the lift station would include a wet well, valve vault, provisions for odor control, a control building with electrical facilities and emergency standby generator, and an electrical service panel and transformer.

The lift station would have two 20 horsepower (HP) pumps installed (one duty and one standby). These pumps would utilize electrical energy on an annual basis. This station would also have an 80-kilowatt (KW) emergency diesel generator to be used during electrical power outages.

To calculate power usage, it is assumed that one 20 HP pump will run approximately 11 hours per day on average to meet ultimate average flows.

3.4.8 General Construction Assumptions

General construction assumptions, as well as the number and types of construction equipment needed, have been assumed for the Project, and are contained in **Table 3-2**, ***TTM 37439 Construction Duration***, and **Table 3-3**, ***TTM 37439 Construction Equipment***, respectively, below.

Table 3-2
Construction Duration

Phase Name	Start Date	End Date	Days
Phase 1			
Site Preparation	4/1/18	6/22/18	60
Grading	6/23/18	1/25/18	155
Building Construction	1/26/19	12/10/21	750
Paving	7/31/21	12/31/21	110
Architectural Coating	7/31/21	12/31/21	110
Phase 2			
Site Preparation	1/1/22	2/25/22	40
Grading	2/26/22	7/29/22	110
Building Construction	7/30/22	11/15/24	600
Paving	11/16/24	2/28/25	75
Architectural Coating	3/1/25	6/13/25	75

Table 3-3
TTM 37439 Construction Equipment

Activity	Equipment	Number	Hours per Day
Phase 1 and 2			
Site Preparation	Rubber Tired Dozers	3	8
	Tractors/Loaders/Backhoes	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	2	8
	Forklifts	6	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
Paving	Paving Equipment	2	8
	Rollers	2	8
	Pavers	2	8
Architectural Coating	Air Compressors	1	8

3.4.9 Services

School(s): Menifee Union School District (MUSD) and Perris Union High School District (PUHSD)
Police: Riverside County Sheriff's Department and California Highway Patrol
Fire: Riverside County Fire Department

In addition to the above agencies/utilities, the Project is located within (or partially within) the following designated constraint or hazard areas:

- Ordinance No. 655, Mount Palomar Lighting Influence Area, Zone B (27.15 miles)
- Ordinance No. 633.10, Stephen's Kangaroo Rat Fee Area
- Multiple Species Habitat Conservation Plan

3.5 USES OF THIS ENVIRONMENTAL IMPACT REPORT

As previously stated, before the proposed Project can be developed, the County must approve the necessary land use entitlements. Approval of the land use entitlements will allow the proposed development to proceed together with the corresponding changes to the physical environment. This DEIR will be used as the information source and CEQA compliance document for the following discretionary actions or approvals by the County:

- Change of Zone;
- Tentative Tract Map;
- Plot Plan;
- Grading Permit;

- Encroachment Permit; and
- Building Permits.

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

4.1 INTRODUCTION

4.1.1 Background

The County of Riverside has prepared this Project Environmental Impact Report (EIR) to evaluate the potential significant environmental impacts that may result from the proposed Project.

The County concluded that an EIR must be prepared to address the potential impacts associated with the proposed Project. The decision to prepare an EIR is documented in the Notice of Preparation (NOP), which is provided in this document in Subchapter 8.1, and was based on the finding that the proposed Project may have one or more potentially significant effects on the environment.

This Chapter of the Draft EIR (DEIR) provides the detailed information used to forecast the type and significance of potential environmental impacts that implementation of the proposed Project and related actions could cause if the Project is implemented as described in Chapter 3, *Project Description*.

Based on the information in the NOP, the County concluded that the proposed Project might cause significant impacts to portions of sixteen (16) issue areas (as identified in the Project Initial Study (IS), and is located in Chapter 8, *Appendices*, of this DEIR.

Therefore, portions of the following issue areas will be addressed in this DEIR:

- Subchapter 4.2: Aesthetics;
- Subchapter 4.3: Agriculture and Forestry Agriculture Resources;
- Subchapter 4.4: Air Quality;
- Subchapter 4.5: Biological Resources;
- Subchapter 4.6: Cultural Resources;
- Subchapter 4.7: Geology and Soils;
- Subchapter 4.8: Greenhouse Gas Emissions;
- Subchapter 4.9: Hazards and Hazardous Materials;
- Subchapter 4.10: Hydrology and Water Quality;
- Subchapter 4.11: Land Use and Planning;
- Subchapter 4.12: Noise;
- Subchapter 4.13: Population and Housing;
- Subchapter 4.14: Recreation;
- Subchapter 4.15: Transportation;
- Subchapter 4.16: Tribal Cultural Resources; and
- Subchapter 4.17: Utilities and Service Systems.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for

implementing the California Environmental Quality Act (CEQA), Appendix G Environmental Checklist Form. Two new environmental topics (Energy and Wildfire) were introduced to be analyzed in future Initial Studies; these environmental topics are being added to the DEIR to be analyzed and are presented as follows:

- Subchapter 4.18: Energy; and
- Subchapter 4.19: Wildfire.

The environmental impact analysis section for each environmental topic listed above is arranged in the following manner:

Introduction

An introduction that summarizes the specific issues of concern for each subchapter, as identified in the IS and the NOP scoping process, where applicable.

Environmental Setting

A summary of the current or existing environmental setting for each physical resource or human infrastructure system is presented as the baseline from which impacts will be forecast. The baseline for the analysis in this DEIR is discussed in greater detail, below.

Thresholds of Significance

Based on stated assumptions and identified criteria or thresholds of significance. These are typically contained in the Project IS (Subchapter 8.3), and/or part of Appendix G, Environmental Checklist Form, of the California Environmental Quality Act (CEQA) Guidelines.

To provide the reviewer with a criterion, or set of criteria, with which to evaluate the significance of potential environmental impacts, this document provides issue specific criteria, i.e. thresholds of significance, for each topic considered in this DEIR. These criteria are either standard thresholds, established by law or policy (such as ambient air quality standards or thresholds of significance established by the South Coast Air Quality Management District) or Project-specific evaluation thresholds that are developed with County Staff and used specifically for this Project.

Potential Impacts

After comparing the forecasted physical changes in the environment that may be caused by implementing the proposed Project with the issue specific significance threshold criterion or criteria, a conclusion is reached on whether the proposed Project has the potential to cause a significant environmental impact for the issue being evaluated. Potential direct and indirect impacts of the proposed Project are forecast, and the significance of impacts is assessed without applying any mitigation.

Standard Conditions and Mitigation Measures

Where appropriate and feasible, measures to reduce potential significant environmental impacts are identified and described in this section of the DEIR. Over the past several years, mitigation has evolved in scope and complexity. As environmental issues are addressed in a progressive and adaptive manner, previous measures developed to mitigate project specific impacts are eventually integrated into local, regional, state and federal statutes, rules and regulations, such as the Uniform Building Code or Water Quality Management Plans (referred to as standard conditions). Mitigation measures that are incorporated into statutes or rules and regulations become mandatory requirements (not discretionary) and they no longer need to be identified as discretionary mitigation measures applicable to the Project, although they are often referenced to demonstrate that identified environmental impacts can and will be mitigated.

Recommended measures that can be implemented to substantially lessen potential environmental impacts are identified described in this section, as well as their effectiveness in reducing impacts to non-significant levels.

Cumulative Impacts

Potential cumulative environmental impacts are assessed under each environmental topic, where applicable.

Cumulative impacts describe potential environmental changes to the existing physical conditions that may occur as a result of project implementation together with other reasonably foreseeable, planned, and approved future projects producing related impacts. The CEQA Guidelines (Section 15355) defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts may result from individually minor but collectively significant projects taking place over a period of time. Projects that have progressed to the state that CEQA review has been initiated are treated as foreseeable probable future projects.

Unavoidable Adverse Impacts

Significant and unavoidable environmental impacts and any significant impacts that may be caused by implementing mitigation measures are addressed.

After determining the degree of mitigation that can be achieved by the proposed measures and after identifying any potential adverse impacts that the mitigation measures may cause, a conclusion is provided regarding the remaining significant and/or unavoidable adverse impact for each environmental topic, if any.

4.1.2 Baseline

This document utilizes conservative (worst-case) assumptions in making impact forecasts based on the assumption that, if impacts cannot be absolutely quantified, the impact forecasts should over-predict consequences rather than under-predict them. The many technical studies that were prepared for this document are incorporated into this Chapter by summarizing the technical information to ensure technical accuracy. The NOP was distributed to the public and

through the State Clearinghouse on October 8, 2018. The NOP comment period closed on November 7, 2018. A Scoping Meeting was held on November 5, 2018.

The Project-specific technical studies prepared in support of this DEIR were all compiled and completed concurrent or after the NOP date of October 8, 2018, and all analysis in the DEIR was compiled subsequent to this date.

These technical studies themselves are compiled in a separate volume of the DEIR (Volume 2), which will be distributed in electronic form and made available to all parties upon request. The information used, and analyses performed, to make impact forecasts are provided in depth in this document to allow reviewers to follow a chain of logic for each impact conclusion and to allow the reader to reach independent conclusions regarding the significance of the potential impacts described in the following subchapters.

4.2 AESTHETICS

4.2.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of aesthetics from implementation of the Project. The Aesthetics Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

1. **Scenic Resources.**
   a. Have a substantial effect upon a scenic highway corridor within which it is located?
   b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?

2. **Mt. Palomar Observatory.**
   a. Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?

3. **Other Lighting Issues.**
   a. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
   b. Expose residential property to unacceptable light levels?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 1.a., 2.a., 3.a., and 3.b., related to aesthetics (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified either "no impact" or "less than significant impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining one (1) issue area, 1.b., related to aesthetics in the questions asked above, **would** be further analyzed in the DEIR.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The County added issue area 1.c., which will also be analyzed in the DEIR.

1. **Scenic Resources.**
   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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Standard Conditions SC-AES-1 (Countywide Design Standards & Guidelines), and **SC-AES-2** (Mt. Palomar Special Lighting Area – Ordinance No. 655), and **SC-AES-3** (Ordinance No. 915)

shall be carried over to this DEIR.

No mitigation measures were presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *County of Riverside General Plan*
  https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- *County of Riverside General Plan Environmental Impact Report (GPEIR) (Chapter 4.4 – Aesthetics)*
  https://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html
- *Harvest Valley/Winchester Area Plan (HVWAP*)
  https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633
- *Sun City/Menifee Valley Area Plan (SCMVAP)*
  https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- Design Standards & Guidelines – Third and Fifth Supervisorial Districts, County of Riverside, July 17, 2001 (*Guidelines*)
  https://planning.rctlma.org/Portals/0/devproc/guidelines/third_fifth_dist/third_fifth_dguide.pdf
- *Google Maps*
- https://www.google.com/maps
- Ordinance No. 348 - Providing for Land Use Planning and Zoning Regulations and Related Functions of the County of Riverside
  https://planning.rctlma.org/Portals/0/Ord.%20348.4898%20Clean%20Version.pdf?ver=2018-12-27-163916-063
- *Site Photos,* prepared by Matthew Fagan Consulting Services, Inc., April 2018 (**Appendix B**)
- *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., March 2019 (**Appendix M**)

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding aesthetics were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 1.b. and 1.c. are the focus of the following evaluation of aesthetics.

4.2.2 Environmental Setting

4.2.2.1 Existing Setting

The proposed Project is located in unincorporated Riverside County, one mile east of the City of Menifee. Refer to **Figure 2.1-2, *Aerial Photo with Project Components***, provided previously in Chapter 2 of this DEIR, which is an aerial photograph of the general Project area. The area surrounding the Project site is flat, rural in character and dominated by large expanses of

agricultural fields with scattered farmsteads and single family residential land uses. The Project site contains a generally square Residential Project site and Off-site Project components, which are both shown together with the surrounding area, on **Figure 3-1, *Assessor's Parcel Map***, provided previously in Chapter 3 of this DEIR.

The Project site is located in the Menifee Valley area. The Residential Project site is located in the Harvest Valley/Winchester Area Plan (HVWAP) and the Off-site Project components are located in the Sun City/Menifee Valley Area Plan (SCMVAP). The SCMVAP describes the Menifee Valley as *conveying to the resident and visitor alike a sense of spaciousness. For the most part, except for the abrupt hillocks that dot the landscape, the Valley's flatness is accentuated by the surrounding hills and distant mountains*. The EIR for the General Plan describes the Menifee Valley as *a valley ringed by ridges; rugged rock outcroppings; pockets of residential uses on edges of the valley; estate development throughout the mountains and hillside areas; some commercial and industrial development; golf courses and residential development; some agriculture use.*

The Residential Project is currently vacant; and partially planted in potatoes and cilantro. The Residential Project is proposing 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of roadways. The elevation of the Residential Project site ranges from approximately 1,434 feet above mean sea level (AMSL) on the western side of the Project site to 1,445 AMSL in the northeastern corner of the site. The Project will also construct two large channels that will traverse the Residential Project site, as well as subsurface storm drains and bioretention basins.

Off-site Project components include: an offsite regional flood control trapezoidal earthen drainage channel that is expected to be included as part of a future Menifee Valley Master Drainage Plan (MDP) and Area Drainage Plan (ADP). The Off-site drainage facility is proposed immediately to the west of the Residential Project, spanning a distance of 1.5 miles (stretching from Eucalyptus Road at the east to Southshore Drive at the west). The trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest, and is currently being used partly for agricultural purposes (to grow crops) but it also contains several farmhouses and a dairy farm in the eastern portion. Off-site facilities will also include a sewer lift station, approximately 11,000 linear feet of sewer line, and five temporary drainage channels. The main channel will have slopes of 0.1% to 0.3%.and the majority of the storm drain systems will have slopes of 0.3%.

The Project will recontour the topography and surface relief features in the Project area to accommodate single-family residential homes, roadways, private open space, landscaping and drainage/water quality facilities (including the trapezoidal earthen drainage channel) in keeping with the existing and proposed physical developments adjacent to the Project site.

A field visit was conducted to determine the appropriate viewpoints for the visual analysis. The visual analysis prepared for the proposed Project consists of providing a discussion of the existing visual setting; using photographs to illustrate the existing visual setting from several viewpoints; describing the quality and character of the existing visual setting. This is discussed below. Descriptions of the proposed Project (after development has taken place); and finally evaluating the extent and significance of any changes to the visual setting from implementing the proposed Project will be addressed in 4.2.4, Project Impacts, below.

Based on a field reconnaissance of the Project site, it was determined that from a visual standpoint there are four (4) visual points of the Project site and surrounding environs that should to be considered for evaluation. It should be noted that the site photos are from eleven (11) visual points. Visual points 1-4 depict the "Residential Project Site Components." Visual points 5-11 show the "Off-site Project Components." Due to the nature and scale of the "Off-site Project Components," there are minimal short-term and negligible long-term aesthetic impacts from these uses. Therefore, they will not be analyzed below. Only the Residential Project Site Components will be part of the analysis. It will be referred to as "Project site" in the analysis below.

The selected viewpoints are depicted on **Figure 4.2-1, *Vantage Point Key Map***.

- Vantage Point No. 1: Looking southerly, westerly, northerly, and easterly from the intersection of Leon Road and Holland Road (northwest corner of the Project site). Reference **Figure 4.2-2, *Vantage Point No. 1***.
- Vantage Point No. 2: Looking southerly, westerly, northwesterly, northerly, and easterly from the intersection of Eucalyptus Road and Holland Road (northeast corner of the Project site). Reference **Figure 4.2-3, *Vantage Point No. 2***, and **Figure 4.2-4, *Vantage Points No. 2*** and ***3***.
- Vantage Point No. 3: Looking northerly, easterly, southerly, westerly, and northwesterly from the intersection of Eucalyptus Road and Craig Avenue (southeast corner of the Project site). Reference **Figure 4.2-4, *Vantage Points No. 2*** and ***3***, **Figure 4.2-5, *Vantage Point No. 3***.
- Vantage Point No. 4: Looking northerly, easterly, southerly, westerly and northeasterly from the intersection of Leon Road and Craig Avenue (southwest corner of the Project site). Reference **Figure 4.2-6, *Vantage Point No. 4***.

The visual qualities of each of these viewpoint locations are described below.

4.2.2.1 Vantage Point No. 1: Looking southerly, westerly, northerly, and easterly from the intersection of Leon Road and Holland Road (northwest corner of the Project site).

As depicted in the photos for Vantage Point No. 1, the following describes the existing visual landscape:

- Facing Southerly (rural setting):
  - Foreground: Vacant field.
  - Middle ground: Vacant field, Leon Road and power poles on the right side of the photo. Electric power poles/lines and eucalyptus trees are the prevalent view features. Low hills are also prevalent.
  - Background: Leon Road, electric power poles/lines and eucalyptus trees, low hills, as well as faint mountains to the south are prevalent view features.
- Facing Westerly (rural setting):
  - Foreground: Intersection of Leon and Holland Road, electric power poles/lines and eucalyptus trees, a house, cars and vacant land are the prevalent view features.
  - Middle ground: Intersection of Leon and Holland Road, Holland Road westerly (dirt), electric power poles/lines and eucalyptus trees, a house, cars and vacant land are the prevalent view features. Trees are visible at a distance behind what appears to be some type of irrigation tank.

  - Background: Low hills, as well as very faint mountains to the west are the prevalent view features.
- Facing Northerly (rural setting):
  - Foreground: Vacant land, Holland Road (dirt), Leon Road, electric power poles/lines and roadway signage are the prevalent view features.
  - Middle ground: Vacant land, electrical power poles/lines and low hills are the prevalent view features.
  - Background: Low hills are the prevalent view features.
- Facing Easterly (rural setting):
  - Foreground: Holland Road and vacant land are the prevalent view features.
  - Middle ground: Residential single-story ranch structures and Holland Road (vacant) are the prevalent view features.
  - Background: Low hills, as well as very faint mountains to the east are the prevalent view features.

Reference **Figure 4.2-2, *Vantage Point No. 1***.

As shown on these pictures, the Project site and surrounding environs are considered "rural." There are views to local hills and distant mountains from Vantage Point No. 1.

4.2.2.2 Vantage Point No. 2: Looking southerly, westerly, northwesterly, northerly, and easterly from the intersection of Eucalyptus Road and Holland Road (northeast corner of the Project site).

As depicted in the photos for Vantage Point No. 2, the following describes the existing visual landscape:

- Facing Southerly (rural setting):
  - Foreground: Eucalyptus Road (dirt), as well as agricultural fields (to the right on the photo), and what appear to be dilapidated greenhouses (to the left on the photo), are the prevalent view features.
  - Middle ground: Eucalyptus Road (dirt), as well as agricultural fields (to the left on the photo), trees, houses and low hills, are the prevalent view features.
  - Background: Low hills are visible, as well as a very faint mountains to the south are the prevalent view features.
- Facing Westerly (vacant land):
  - Foreground: Holland Road (dirt), and agricultural fields are the prevalent view features.
  - Middle ground: Holland Road (dirt), and agricultural fields are the prevalent view features.
  - Background: Trees, low hills, as well as very faint mountains to the west are the prevalent view features.
- Facing Northwesterly (rural setting):
  - Foreground: Holland Road (dirt), and agricultural fields are the prevalent view features.
  - Middle ground: Holland Road (dirt), and agricultural fields are the prevalent view features.
  - Background: Trees, low hills, as well as very faint mountains to the west are the prevalent view features.
- Facing Northerly (rural setting):
  - Foreground: Eucalyptus Road (dirt), and agricultural fields are the prevalent view

features.
  - Middle ground: Eucalyptus Road (dirt), and agricultural fields, as well as a farm and farmhouse are the prevalent view features.
  - Background: Low hills to the north are the prevalent view features.
- Facing Easterly (rural setting):
  - Foreground: Holland Road (dirt), and agricultural fields are the prevalent view features.
  - Middle ground: Eucalyptus Road (dirt), and agricultural fields, as well as a few farmhouses are the prevalent view features.
  - Background: Low hills to the east are the prevalent view features.

Reference **Figure 4.2-3, *Vantage Point No. 2***, and **Figure 4.2-4, *Vantage Points No. 2*** and ***3***.

As are shown on these pictures, the Project site is and surrounding environs are considered "rural". There are views of local hills from Vantage Point No. 2.

4.2.2.3 Vantage Point No. 3: Looking northerly, easterly, southerly, westerly, and northwesterly from the intersection of Eucalyptus Road and Craig Avenue (southeast corner of the Project site).

As depicted in the photos for Vantage Point No. 3, the following describes the existing visual landscape:

- Facing Northerly (rural setting):
  - Foreground: Eucalyptus Road (dirt), and agricultural fields are the prevalent view features.
  - Middle ground: Eucalyptus Road (dirt), and agricultural fields, as well as a farm and farmhouse are the prevalent view features.
  - Background: Low hills to the north are the prevalent view features.
- Facing Easterly (rural setting):
  - Foreground: Craig Avenue (dirt), and agricultural fields are the prevalent view features.
  - Middle ground: Craig Avenue (dirt), and agricultural fields, as well as a few farmhouses are the prevalent view features.
  - Background: Low hills as well as mountains to the east are the prevalent view features.
- Facing Southerly (rural setting):
  - Foreground: Foreground: Eucalyptus Road (dirt), Craig Avenue (dirt), and agricultural fields are the prevalent view features.
  - Middle ground: Eucalyptus Road (dirt), agricultural fields, and low hills are the prevalent view features.
  - Background: Local low hills and distant mountains to the south are the prevalent view features.
- Facing Westerly (rural setting):
  - Foreground: Craig Avenue (dirt), an irrigation ditch, and agricultural fields are the prevalent view features.
  - Middle ground: Craig Avenue (dirt), an irrigation ditch, and agricultural fields are the prevalent view features.
  - Background: View of local hills, trees, houses and faint, distant mountains are the prevalent view features.
- Facing Northwesterly (rural setting):
  - Foreground: Small signage, irrigation ditches, irrigation pipes and agricultural fields are

the prevalent view features.
- Middle ground: Agricultural fields are the prevalent view features.
- Background: View of local hills, and trees are the prevalent view features.

Reference **Figure 4.2-4, *Vantage Points No. 2*** and ***3***, **Figure 4.2-5, *Vantage Point No. 3***.

As are shown on these pictures, the Project site and surround environs are considered "rural. " There are distant views to hills and mountains from Vantage Point No. 3.

4.2.2.4 Vantage Point No. 4: Looking northerly, easterly, southerly, westerly and northeasterly from the intersection of Leon Road and Craig Avenue (southwest corner of the Project site).

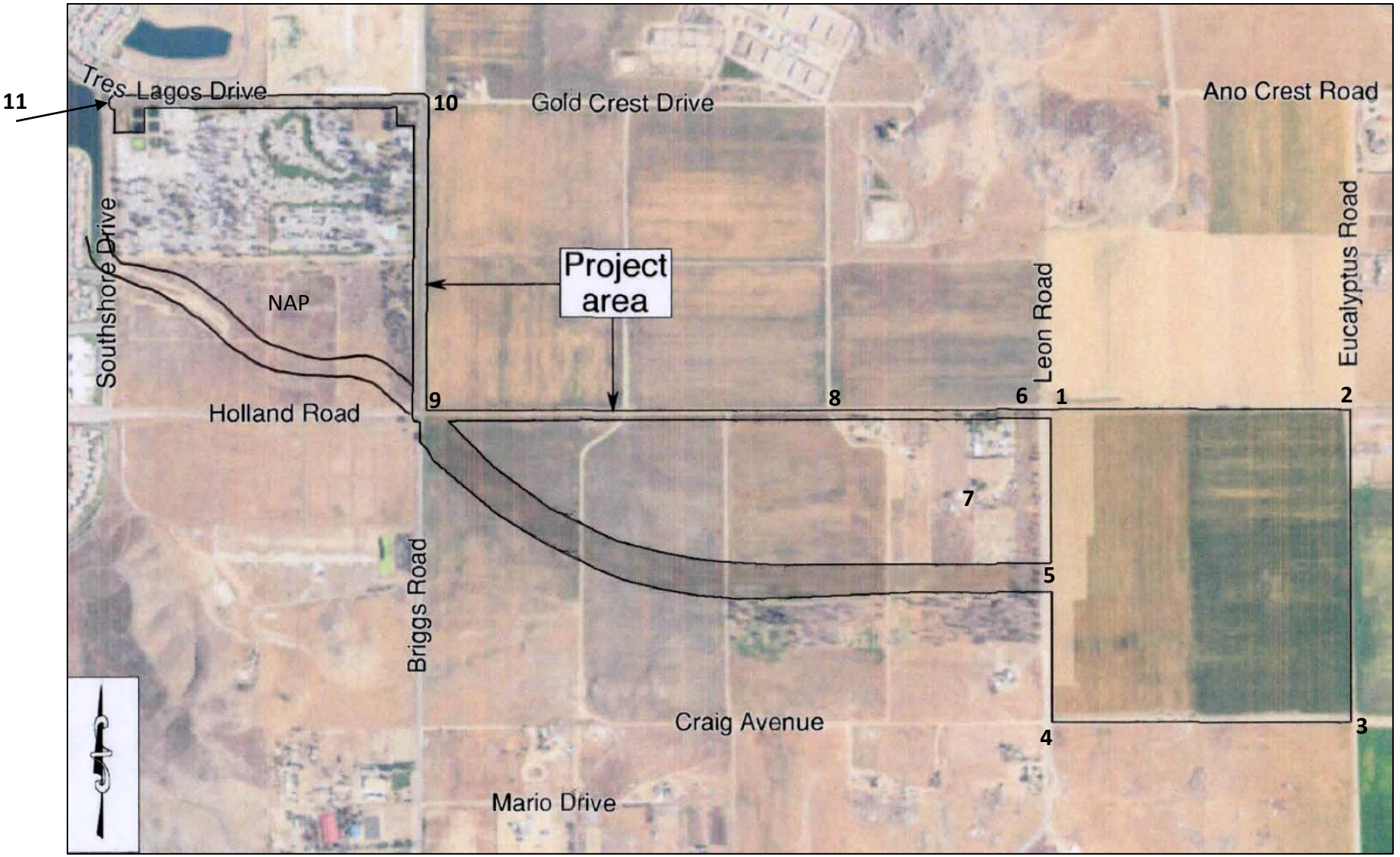
As depicted in the photos for Vantage Point No. 4, the following describes the existing visual landscape:

- Facing Northerly (rural setting):
  - Foreground: Purple irrigation pipes, vacant land, Leon Road and electric power poles/lines are prevalent view features.
  - Middle ground: Vacant land, Leon Road and electric power poles/lines and trees are the prevalent view features.
  - Background: Low hills, as well as very faint mountains to the west are the prevalent view features.
- Facing Easterly (rural setting):
  - Foreground: Craig Avenue (dirt), and agricultural fields, vacant land and 2 isolated rock outcroppings are the prevalent view features.
  - Middle ground: Craig Avenue (dirt), and agricultural fields, vacant land, low hills and farmhouses are the prevalent view features.
  - Background: Low hills and distant mountains to the east are the prevalent view features.
- Facing Southerly (rural setting):
  - Foreground: Craig Avenue (dirt), agricultural fields, a power pole and Leon Road are the prevalent views.
  - Middle ground: Agricultural fields, a house, electric power poles/lines trees and Leon Road are the prevalent views.
  - Background: Low hills, houses, and distant mountains to the south are the prevalent view features.
- Facing Westerly (rural setting):
  - Foreground: Craig Avenue (dirt), and Leon Road are the prevalent view features.
  - Middle ground: Vacant land, rock outcroppings and Craig Avenue (dirt) are the prevalent view features.
  - Background: Low hills, houses, and distant mountains to the west are the prevalent view features.
- Facing Northeasterly (rural setting):
  - Foreground: Leon Road and vacant land are the prevalent view features.
  - Middle ground: Vacant land and low hills are the prevalent views.
  - Background: Low hills, houses, and distant mountains to the northeast are the prevalent view features.

Reference **Figure 4.2-6, *Vantage Point No. 4***.

As are shown on these pictures, the Project site and surrounding environs are considered "rural." There are views to local hills and mountains from Vantage Point No. 4.

FIGURE 4.2-1
VANTAGE POINT KEY MAP



Source: Site Photos (**Appendix B**)

Key Map

FIGURE 4.2-2
VANTAGE POINT NO. 1

1 – south

1 – west

Source: Site Photos (**Appendix B**)

FIGURE 4.2-2
VANTAGE POINT NO. 1, CONTINUED

1 – north

1 – east

Source: Site Photos (**Appendix B**)

FIGURE 4.2-3
VANTAGE POINT NO. 2

2 – south

2 – west

Source: Site Photos (**Appendix B**)

FIGURE 4.2-4
VANTAGE POINT NO. 2, CONTINUED

2 – northwest

2 – north

Source: Site Photos (**Appendix B**)

FIGURE 4.2-5
VANTAGE POINT NO. 2 AND 3

2 – east

3 – north

Source: Site Photos (**Appendix B**)

FIGURE 4.2-6
VANTAGE POINT NO. 3

3 – east

3 – south

Source: Site Photos (**Appendix B**)

FIGURE 4.2-5
VANTAGE POINT NO. 3, CONTINUED

3 – west

3 – northwest

Source: Site Photos (**Appendix B**)

FIGURE 4.2-6
VANTAGE POINT NO. 4

4 – north

4 – east

Source: Site Photos (**Appendix B**)

FIGURE 4.2-6
VANTAGE POINT NO. 4, CONTINUED

4 – south

4 – west

Source: Site Photos (**Appendix B**)

FIGURE 4.2-6
VANTAGE POINT NO. 4, CONTINUED

4 – northeast

Source: Site Photos (**Appendix B**)

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4.2.2.5 Existing Regulations

Following are the applicable state and local regulations as they apply to aesthetics.

State

The California Scenic Highways program was established in 1963 to "preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways." State laws governing the Scenic Highway Program are found in the Streets and Highway Code, Section 260, *et seq*. No State-designated or eligible scenic highways exist within the Project area.

Local

County General Plan Requirements

The proposed Project is located in unincorporated territory that is governed by the County General Plan. The Residential Project site is governed by the HVWAP and the Off-site Project components are governed by the SCMVAP.

The General Plan, the HVWAP and the SCMVAP identify designated and eligible Scenic Highways and provide policies related to their protection. However, the roadways adjacent to the Project site are not located next to or in the vicinity of a County Eligible Scenic Highway. For this reason, the project is not subject to the any General Plan and Area Plan Scenic Highway policies.

The following General Plan and Area Plan policies apply:

- **HVWAP 9.1** Adhere to the lighting requirements specified in Riverside County Ordinance No. 655 for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Mount Palomar Observatory.
- **OS 21.1** Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.

Third and Fifth Supervisorial Districts Design Standards and Guidelines

The County has adopted land development guidelines and minimum development specifications. The minimum development specifications are contained in Riverside County Ordinance No. 348 and the development guidelines are provided in the "Third and Fifth Supervisorial Districts Design Standards and Guidelines" (*Guidelines*). The *Guidelines* supplement the minimum specifications in Ordinance No. 348 and guide the following design components:

- General Residential Design Standards;
- Residential Lot Design;
- Residential Street Design;
- Neighborhood Entry Statements;
- Street Medians;
- Reverse Frontage Treatments;

- Minimum Street, Median; and
- Parkway Widths.

Adherence to the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* is a standard condition and is not considered unique mitigation under CEQA (see **Standard Condition SC-AES-4**, in Section 4.2.5).

Ordinance No. 348

According to Article VIIId R-4 Zone (Planned Residential), Section 8.90 – Statement of Intent and Policy:

> "*The Board of Supervisors finds that because of the rapid urbanization taking place in the County, it is desirable to permit the development of subdivisions containing open areas that will be used for recreation purposes or will tend to preserve the rural atmosphere of the area. Therefore, lots containing an area less than the minimum lot area now established may be permitted provided open areas are developed and maintained for the use and benefit of the residents of the subdivision.*"

The Project is required to prepare a development plan, pursuant to Section 8.95, Conditions of Development. Adherence to the *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., February 2019 (**Appendix M**) is a standard condition, and is not considered unique mitigation under CEQA (see **Standard Condition SC-AES-5**, in Section 4.2.5).

4.2.3 Thresholds of Significance

As discussed in Section 4.2.1, the Project impacts to two (2) criterion pertaining to aesthetics will be analyzed. According to the IS, the Project would have a significant impact if it would:

1. Scenic Resources.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?

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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential aesthetic changes in the environment are addressed in response to the above thresholds in the following analysis.

4.2.4 Potential Impacts

THRESHOLD 1.b: Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?

Less Than Significant Impact

Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks the view of a vista. Second, the vista itself may be altered (e.g., development on a scenic hillside). The natural mountainous setting of the Menifee area is critical to its overall visual character and provides scenic vistas for the community.

Scenic views from the area include the following: the San Jacinto Mountains to the northeast and east; the San Bernardino Mountains to the north; the San Gabriel Mountains to the northwest; the Santa Ana Mountains to the west and southwest, and the Palomar Mountains to the south.

As shown on **Figure 4.2-1, *Vantage Point Key Map***, the Project site is surrounded on all sides by rural development that is predominantly agricultural.

The proposed Project will change the visual character of the Project site and the area by adding structures and landscaping. A total of 574 single-family residential lots are proposed. The Project includes four (4) individual neighborhoods, with minimum lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft. Five (5) architectural styles have been provided. A minimum of four (4) architectural elevations and three (3) floor plans are required for each neighborhood comprised of 50 or more homes.

The centerpiece of the community is a minimum 8.96-acre community park located in northwest portion of the Project. The Project also features landscape buffers, passive open space areas, ten (10) paseos, and approximately 13,264 linear feet (LF) of trails/paseos and 56,417 LF of public street sidewalks. The minimum 8.96-acre community park provides a variety of active recreational amenities for Project residents and the general public. Active recreational amenities within the community park shall include, at a minimum, the following:

- Lighted ball field;
- Lighted soccer fields;
- Half-court basketball;
- Tot lot;
- Open turf play area(s);
- Picnic area with shade;
- Seating area(s);
- A restroom building; and
- Parking.

Figures 4.2-2 through **Figures 4.2-6** depict the Project site, its immediate environs, and views to any scenic vistas and will be utilized for the analyses, below.

- *Trees*

There are no trees on the Project site. No impacts will occur.

- *Rock outcroppings*

As shown on **Figure 4.2-6, *Vantage Point No. 4***, there are small, isolated rock outcroppings on the Project site. These will be removed as part of the Project development. Due to the number and size of these outcroppings, their removal will be considered less than significant.

- *Unique, or Landmark Features*

As described in Sections 4.2.2.2 through 4.2.2.5 and shown on **Figures 4.2-2** through **Figures 4.2-6**, there are no unique, or landmark feature on the Project site. Therefore, development of the Project site will not impact these resources.

- *Obstruct any prominent Scenic Vista or View Open to the Public*

Mountains that are visible from the Project site, or the immediate environs are faint, at best. In addition, there are no scenic vistas within the area that will be affected by the Project. While some views from the existing (and proposed) development may be obscured by the Project, they are not a true scenic view, as described by the General Plan EIR. Implementation of the Project will not have impacts on any scenic vistas. The Project will not significantly affect any views of the local hills. Therefore, any impacts will be less than significant.

- *Result in the Creation of an Aesthetically Offensive Site Open to Public View*

The Project will clearly change the visual setting for the Project site and its immediate environs. The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential. The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan (see **Standard Condition SC-AES-5**, in Section 4.2.5), as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **Standard Condition SC-AES-4**, in Section 4.2.5). This will ensure an aesthetically pleasing Project.

The area surrounding the Project site is flat, rural in character and dominated by large expanses of agricultural fields with scattered farmsteads and single family residential land uses. The Project site is surrounded by properties with Medium Density Residential General Plan Land Use Designations to the north, south and east. These properties will ultimately be developed in a manner similar to the Project. The properties to the west of the Project site have an Estate Density Residential (EDR) General Plan Land Use designation. This designation would allow for large-lot single-family residential development and will also encompass the area for the proposed drainage facilities. Upon development of the Project, the current site views will be altered, as discussed above. Leon Road will separate the large-lot single-family residential development from the Project site. Currently, Leon Road is a 2-lane, improved, undivided roadway, adjacent to the Residential Project Site Component.

Leon Road is classified as an "Arterial Highway" on the Riverside County General Plan Roadway Network. An Arterial Highway is a 4-lane roadway with a 128' ROW, an 86' wide roadway, an 18' wide curbed median, with a 21' wide parkway on both sides of the roadway. Leon Road currently has an existing 60' ROW. The Project proposes to dedicate an additional 29' adjacent to the Residential Project Site Components (between Eucalyptus and Leon Roads. Project improvement would include an additional 8' of pavement, 6" curb, and a 21' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway.

The Project area is slated for suburban densities and has been since 2003. While there will be a difference in land development intensity between the Project and the properties to the west, this has been already anticipated.

Therefore, the Project will not result in the creation of an aesthetically offensive site open to public view, since future development in the surrounding area would be similar in appearance due to the proposed General Plan Land Use designations (densities) and zoning classifications (densities) as shown below.

Adjacent and Surrounding Land Use Designation(s):

1. **Residential Project Site Components (all CD):**
   - North: Medium Density Residential (MDR).
   - South: Medium Density Residential (MDR).
   - East: Medium Density Residential (MDR).
   - West: Estate Density Residential (EDR).

2. **Off-Site Project Components (CD and RC):**
   - North: Estate Density Residential (CD: EDR).
   - South: Estate Density Residential (RC: EDR).
   - East: Medium Density Residential (CD MDR).
   - West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

Adjacent and Surrounding Zoning:

1. **Residential Project Site Components:**
   - North: Specific Plan (SP) – (Specific Plan 293 - Winchester Hills).
   - South: Rural Residential (R-R).
   - East: Rural Residential (R-R) and One-Family Dwellings (R-1).
   - West: Rural Residential (R-R) and Light Agriculture, 5-acre minimum lot size (A-1-5).

2. **Off-Site Project Components:**
   - North:
     - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
     - City of Menifee: Rural Residential (R-R).
   - South:
     - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
     - City of Menifee: Light Agriculture, 2½-acre minimum lot size (A-1-2½).

- East:
  - County of Riverside: Rural Residential (R-R), One-Family Dwellings (R-1), and Light Agriculture, 2½-acre minimum lot size (A-1-2½).
  - City of Menifee: N/A.
- West:
  - County of Riverside: Light Agriculture, 5-acre minimum lot size (A-1-5).
  - City of Menifee: Menifee East Specific Plan (SP).

Adjacent Project will also be subject to **Standard Conditions SC-AES-1** through **SC-AES-1** which will require a variety of styles of homes, open space, parks etc. Any impacts will be less than significant.

THRESHOLD 1.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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact

Please reference the discussion in Threshold 1.b. The Project site is located in a rural area which is planned for urban development. As demonstrated in Threshold 1.b, the Project will clearly change the visual setting for the Project site and its immediate environs. The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential. The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan (see **Standard Condition SC-AES-5**, in Section 4.2.5), as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **Standard Condition SC-AES-4**, in Section 4.2.5). This will ensure an aesthetically pleasing Project.

The Project site is surrounded by properties with Medium Density Residential General Plan Land Use Designations. These properties will ultimately be developed in a manner similar to the Project.

Therefore, the Project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings, nor will the Project conflict with applicable zoning and other regulations governing scenic quality. Any impacts will be less than significant.

4.2.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Conditions SC-AES-1, SC-AES-2, SC-AES-3, **SC-AES-4**, and **SC-AES-5** are applicable to all Projects within the County and are not considered unique mitigation under CEQA.

SC-AES-1 **The Project shall be consistent with the Countywide Design Standards & Guidelines which are in effect at the time of map design and at building permit issuance.**

SC-AES-2 **Within the Mt. Palomar Special Lighting Area, as defined in Ordinance No. 655, low pressure sodium vapor lighting or overhead high-pressure sodium vapor lighting with shields or cutoff luminaries, shall be utilized. Any outside lighting shall be hooded and directed so as not to shine directly upon adjoining property or public rights-of-way. The Project will be conditioned that, prior to the issuance of building permits, all new construction which introduces light sources be required to have shielding or other light pollution-limiting characteristics such as hood or lumen restrictions.**

SC-AES-3 **The Project shall comply with Ordinance No. 915 which requires all outdoor luminaires to be located, adequately shielded, and directed such that no direct light falls outside the parcel of origin, onto the public right-of-way. Ordinance No. 915 also prohibits blinking, flashing and rotating outdoor luminaires, with a few exceptions. Prior to the issuance of building permits, all new construction which introduces light sources, shall be required to shield any outdoor luminaire by opaque components or materials, such that light rays are limited to the parcel of origin and the light source is not visible from another property or public right-of-way.**

SC-AES-4 **The Project shall be consistent with the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* which are in effect at the time of map design and at building permit issuance.**

SC-AES-5 **The Project shall comply with the final approved version of the *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc.**

Mitigation Measure(s)

No mitigation measures are required.

4.2.6 Cumulative Impacts

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. However, this change was anticipated under the General Plan Land Use Plan. The General Plan EIR (Section 4.4.3) states:

> "*Build out of the proposed General Plan would result in a substantial increase in urban uses throughout the proposed General Plan area. The development of structures and facilities would occur on vacant properties within unincorporated areas of the County and would be consistent with the policies outlined in the proposed General Plan. Similarly, the replacement, expansion, or refurbishment of existing development would occur pursuant to the proposed General Plan policies...*"
>
> and concludes:
>
> "*The proposed General Plan includes policies that will: concentrate growth near or within existing urban and suburban areas; preserve the existing rural and open space character of the County; provide for the permanent preservation of important natural and scenic resources; incorporate open space within developed areas; ensure the compatibility of existing and new development; maintain or enhance the character of the project site and its immediate area; conserve view corridors, skylines, and scenic vistas; and impose restrictions on development activities that may adversely affect the existing visual characteristics of sites within the County. Furthermore, Appendix J of the proposed General Plan contains Community Center Guidelines, that address landscape, streetscape, building, layout, and other aspects of the community centers. Adherence to these guidelines would reduce or eliminate aesthetic impacts relating to community center development.*"

There will be an associated change in views, both to and from the Project site.

As discussed in the Initial Study, the Project will not have a substantial effect upon a scenic highway corridor within which it is located. The Project site is not located within view from a state scenic highway. In addition, with adherence to code requirements and Project design features, the Project will not interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655; create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or expose residential property to unacceptable light levels (see **Standard Conditions SC-AES-2** and **SC-AES-3**). No cumulative impacts are anticipated on these issues that were discussed in the Initial Study.

No scenic vistas will be significantly altered due to implementation of the Project. Mountains that are visible from the Project site, or the immediate environs are faint, at best. In addition, there are no scenic vistas within the area that will be affected by the Project. While some views from the existing (and proposed) development may be obscured by the Project, they are not a true scenic view, as described by the General Plan EIR.

The Project will clearly change the visual setting for the Project site and its immediate environs. The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential. The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **Standard Conditions SC-AES-1**, **SC-AES-4**, and **SC-AES-5**). The Project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings, nor will the Project conflict with applicable zoning and other regulations governing scenic quality.

4.2.7 Unavoidable Significant Adverse Impacts

The existing visual setting of the proposed Project site will be permanently altered. The intensification of the Project's disturbance and development greater than that which presently occurs on the site results in an unavoidable impact of the proposed Project, primarily to the existing agricultural uses to the east of Briggs Road. But, as discussed in Section 4.2.4, Project Impacts, this impact has been determined to be a less than significant aesthetic impact. This proposed Project can be implemented in conformance with the Project Design Manual and the *Third and Fifth Supervisorial Districts Design Standards and Guidelines*, both which serve to implement the Goals and Policies of the General Plan. While the impacts are unavoidable, they are not considered significant, or adverse.

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4.3 AGRICULTURE AND FOREST RESOURCES

4.3.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of agriculture and forestry resources from implementation of the Project. The Agriculture and Forestry Resources Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

4. Agriculture.
   a. 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?
   b. Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?
   c. Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?
   d. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

5. Forest.
   a. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g))?
   b. Result in the loss of forest land or conversion of forest land to non-forest use?
   c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 5.a. through 5.c., related to forest resources (in the questions asked above) **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified "no impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining four (4) issue areas related to agriculture resources in the questions asked above **would** be further analyzed in the DEIR.

No standard conditions or mitigation measures have been carried over to this DEIR from the IS.

In addition to the IS, the following sources were used in the evaluation presented in this subchapter:

- *County of Riverside General Plan (Multipurpose Open Space Element, Agricultural Resources and Forest Resources)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- *Riverside County Integrated Project, General Plan Final Program Environmental Impact Report, GPA00618, EA No. 38614, EIR No. 441, Volume I, prepared by County of Riverside Transportation and Land Management Agency*

https://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html

- *Sun City/Menifee Valley Area Plan, December 13, 2016 (SCMVAP)* http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- *Harvest Valley/Winchester Area Plan, December 6, 2016 (HVWAP)* http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633
- *Air Quality Impact Analysis for Canterwood (Tentative Tract Map No. 37439), County of Riverside,* prepared by Urban Crossroads, February 27, 2019 (*AQ Impact Analysis* **Appendix C**)
- *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., March 2019 (**Appendix M**)

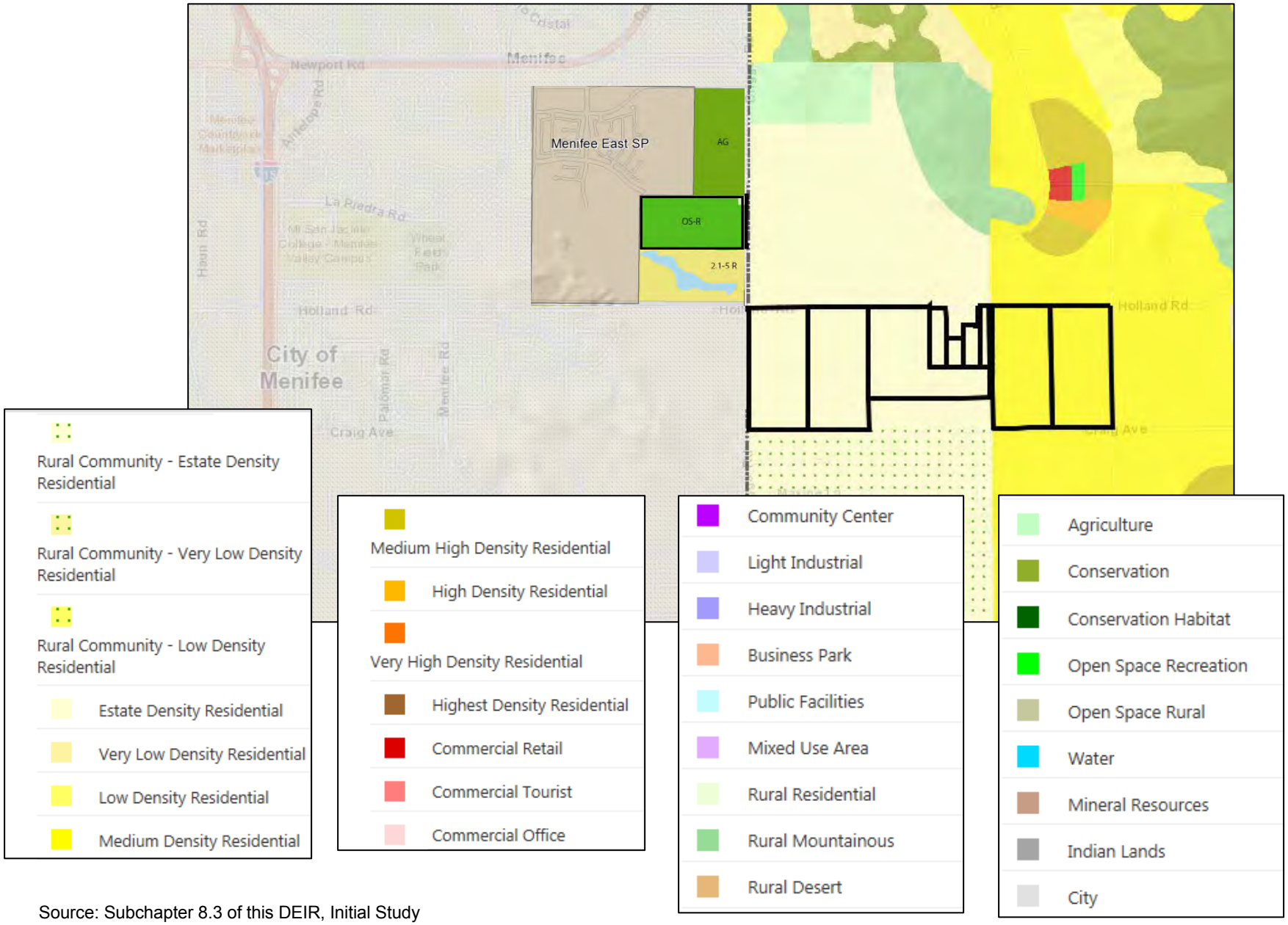
Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter #1 was received from the Department of Conservation's Division of Land Resource Protection (dated 10/19/18) regarding agriculture resources. Within this comment letter were the following comments pertaining to agriculture:

- The Project site contains Prime Farmland and Farmland of Statewide importance.
- The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources.
- The County as lead agency should not approve the proposed Project if there are feasible alternatives or feasible mitigation available that would lessen the significant effects of the Project.
- Establishing an agricultural conservation easement on land of at least equal quality and size can mitigate Project impacts.
- The lead agency (County) must fully investigate whether there is a need for the Project, whether it is possible to mitigate the loss of agricultural land, and whether there are environmentally superior alternatives to the Project.

Response: The proposed Project site contains Prime Farmland and Farmland of Statewide importance as confirmed by Map My County. However, the Project site also has a General Plan Foundation Component of Community Development (CD) and General Plan Land Use designations of Medium Density Residential (MDR) and Estate Density Residential (EDR). Reference ***Figure 4.3-1***, ***General Plan Land Use Designations Map****.*

FIGURE 4.3-1
GENERAL PLAN LAND USE DESIGNATIONS MAP



Source: Subchapter 8.3 of this DEIR, Initial Study

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The proposed Project is consistent with the Community Development Foundation Component and will not require a change to the EDR and MDR General Plan Land Use designations. According to the General Plan (p. LU-4): "*Community Development – identifies those areas appropriate for urban or suburban development, including areas for single family and multiple family residential uses, commercial, industrial, business park, public facilities, and a mix of uses." This definition does not include any agricultural uses. The Project site has had both Community Development Foundation Component and residential designations since the adoption of the General Plan in 2003 (approximately 17 years ago).*

Therefore, CEQA does not require the County to take the following steps: (i) fully investigate whether there is a need for the Project, (ii) whether it is possible to mitigate the loss of agricultural land, (iii) whether there are environmentally superior alternatives to the Project or (iv) mitigate Project impacts by establishing an agricultural conservation easement on land of at least equal quality and size.

No comments regarding agriculture and forestry resources were received at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 4.a through 4.d, and the issues identified in the IS/NOP are the focus of the following evaluation of agriculture and forestry resources.

4.3.2 Environmental Setting

The proposed Project includes the "Residential Project site" components and the "Off-site Project components" which consist of roadway, drainage, and sewer improvements to serve the Project.

The proposed Residential Project site has a General Plan Foundation Component of Community Development and a Land Use Designation of Medium Density Residential (MDR).

The Off-site Project components have a General Plan Foundation Component of Community Development and a Land Use Designation of Estate Density Residential (EDR).

The proposed Residential Project site and the proposed Off-site Project components do not require changes to the General Plan Foundation Component or to the Land Use Designations.

The proposed Residential Project site is zoned One-Family Dwellings (R-1) which would allow single-family detached and attached residences with a density range of 2 to 5 dwelling units per acre, limited agriculture and animal keeping, and lot sizes range from 5,500 to 20,000 square feet (typical 7,200 square foot lots are allowed).

The Residential Project site is proposing to change the zoning classification from R-1 to R-4 (Planned Residential) which would allow one-family dwellings, multiple-family dwellings, nonprofit community centers, community service areas and medical facilities, etc. As shown on **Figure 4.3-2, *Farmland Designations***, the Residential Project site (approximately 158 acres) is designated as either farmland of state importance, prime farmland, or farmland of local importance. The farmland of state importance comprises 100.7 gross acres, prime farmland comprises 57.2 gross acres, and farmland of local importance comprises 0.3 acres.

The Off-site Project components are zoned R-R (Rural Residential) and A-1-5 (Light Agriculture, 5-acre minimum lot size. The off-site Project components will not affect farmland to the same degree that the on-site Project components will and, therefore, are not included on **Figure 4.3-2**. Off-site components include General Plan Circulation Element roadways improvements and area drainage facilities, which will have limited impacts to farmland.

No change to the zoning designations for the Off-site Project components is proposed.

FIGURE 4.3-2
FARMLAND DESIGNATIONS

Source: VSL Engineering and Map My County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public

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4.3.2.1 Climate/Meteorology

Local climatic conditions in the Project area are characterized by warm summers, mild winters, and infrequent rainfall. More than 90 percent of the South Coast Air Basin's rainfall occurs from November through April. The average annual precipitation 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.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit).

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the dispersion and transport of air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings periods of strong, dry offshore winds, called "Santa Anas". 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.

4.3.2.2 Current Adjacent Land Uses

4.3.2.2.a Residential Project Site

The Residential Project site consists of a generally square-shaped tract of agricultural land in Assessor's Parcel Numbers (APN) 466-310-002 and -026, bounded by Holland Road on the north, Eucalyptus Road on the east, Craig Avenue on the south, and Leon Road on the west. The Residential Project site is located one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of flat agricultural fields with scattered farmsteads and single family residential land uses. **Figure 2-5, *Vicinity Map*; and Figure 2-3*, Aerial Photo with Project Components***, provide the site location at various map scales and an aerial photograph showing the local adjacent development patterns.

Surrounding land uses include the following:

- North of the site consists of vacant land;
- East of the site consists of vacant land and land used for agricultural purposes;
- South of the Project site consists of vacant land; and
- West of the site consists of residential and vacant land.

4.3.2.2.b Off-site Project components

The proposed Off-site Project components include a trapezoidal earthen drainage channel (Holland Channel) that lies immediately to the west of the proposed Project site and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed drainage channel spans a distance of 1.5 miles, stretching from Eucalyptus Road to the east to Southshore Drive to the west, and is bounded by Holland Road to the north and Craig Avenue to the south.

The off-site sewer will be installed in the Holland Road, Briggs Road, and Tres Lagos Road rights of way (ROW).

The Off-Site Project Component is located in the Highway 79 Policy Area and in the Estate Density Residential & Rural Residential Policy Area.

4.3.2.3 Soils

The Project site is underlain by the following soils, as shown on **Figure 4.3-3, *Geotechnical Map***:

- Topsoil/Disturbed Native Soils (Af);
- Native Alluvial Soil (Qof_a); and
- Quartz Diorite (Kdvg).

These three (3) soils are described in greater detail, below. Please reference **Figures 4.3-4a, *Boring Locations for the Residential Project Site Components***, and **4.3-4b, *Boring Locations for the Off-Site Project Components***, which correspond to the descriptions, below.

1. Topsoil/Disturbed Native Soil (Af).

Tilled agricultural topsoil was exposed in all borings and test pits throughout the Project site to a depth of approximately 2'-3' below existing ground surface. The topsoil consists of light brown, silty fine sand that contains small quantities of organics from fertilization. The maximum depth of topsoil/fill encountered was 3'.

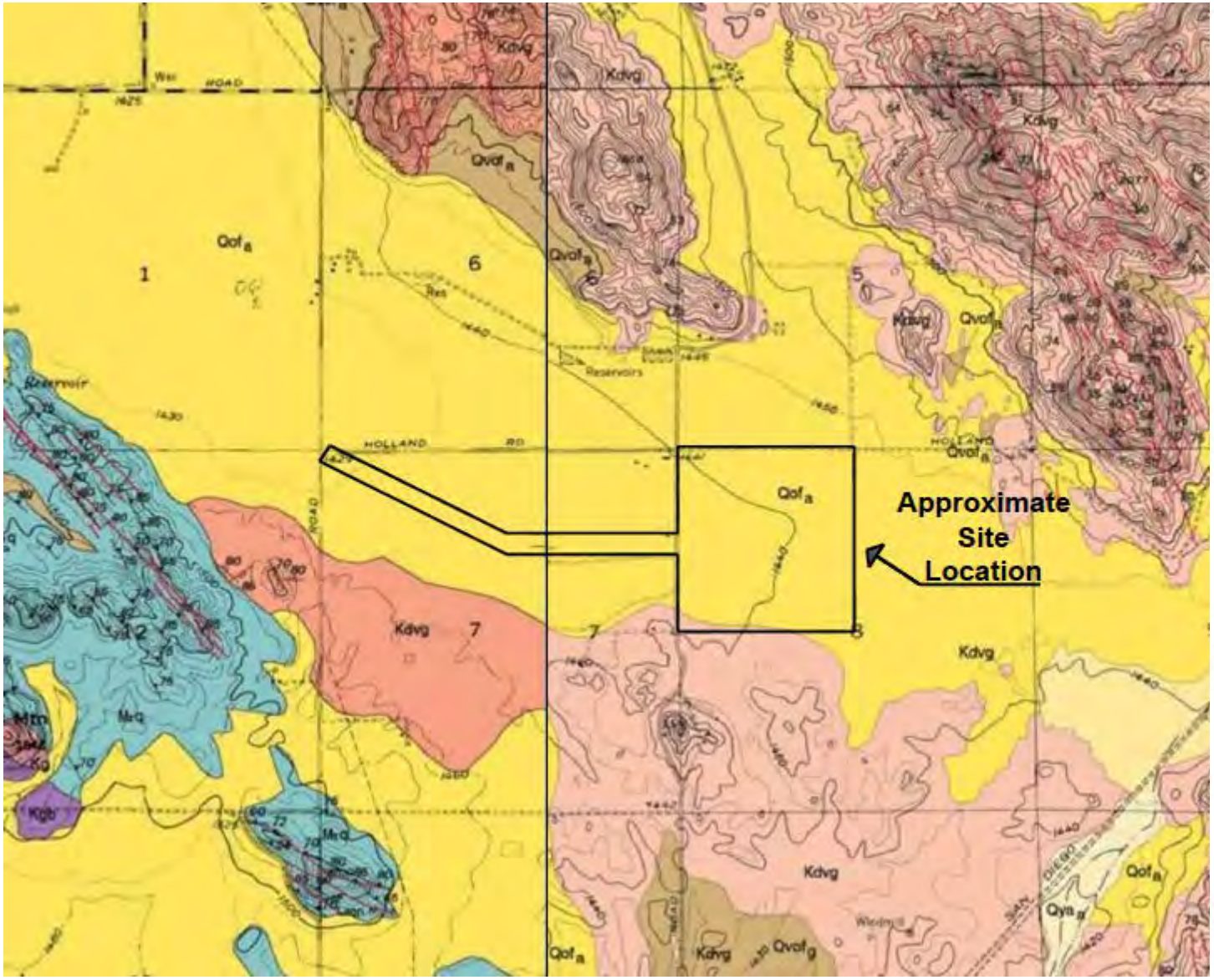
2. Native Alluvial Soil (Qof_a).

Native soil, exposed in all 4 test pits and 5 exploratory borings, as well as the 26 test pits and 19 borings excavated by previous consultants, consists of reddish brown to dark brown, clayey fine to medium sand that is in a moist to damp and dense to very dense condition, and grades to coarser material at depth. Minor porosity was observed in more clayey materials. Maximum depth of soil encountered during the site investigation was 21', and maximum depth documented in reports by previous consultants is 50'.

3. Quartz Diorite (Kdvg).

Bedrock was not encountered in test pits or borings but is exposed at the surface in the southwest corner of the site, and highly weathered bedrock is documented at a depth of 35'. The bedrock consists of light gray to whitish gray, medium-grained quartz diorite. The rock is mostly massive with some minor fracturing on the exposed face and was slowly excavated by a backhoe with considerable difficulty.

FIGURE 4.3-3
GEOTECHNICAL MAP



DESCRIPTION OF MAP UNITS

VERY YOUNG SURFICIAL DEPOSITS—Sediment recently transported and deposited in channels and washes, on surfaces of alluvial fans and alluvial plains, and on hillslopes. Soil-profile development is non-existent. Includes:

Qw — **Very young wash deposits (late Holocene)**—Unconsolidated bouldery to sandy alluvium of active and recently active washes

Qv — **Very young alluvial valley deposits (late Holocene)**—Active and recently active fluvial deposits along valley floors. Consists of unconsolidated sandy, silty, or clay-bearing alluvium

YOUNG SURFICIAL DEPOSITS—Sedimentary units that are slightly consolidated to cemented and slightly to moderately dissected. Alluvial fan deposits (Qyf series) typically have high coarse:fine clast ratios. Younger surficial units have upper surfaces that are capped by slight to moderately developed pedogenic-soil profiles (A/C to A/AC/$B_{cambric}C_{ox}$ profiles). Includes:

Qyf — **Young alluvial fan deposits (Holocene and late Pleistocene)**—Unconsolidated deposits of alluvial fans and headward drainages of fans. Consists predominately of gravel, sand, and silt. Trunk drainages and proximal parts of fans contain higher percentage of coarse-grained sediment than distal parts. Restricted to small area north of Double Butte

Qya — **Young alluvial channel deposits (Holocene and late Pleistocene)**—Fluvial deposits along canyon floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

Qyv — **Young alluvial valley deposits (Holocene and late Pleistocene)**—Fluvial deposits along valley floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

OLD SURFICIAL DEPOSITS—Sedimentary units that are moderately consolidated and slightly to moderately dissected. Older surficial deposits have upper surfaces that are capped by moderately to well-developed pedogenic soils (A/AB/B/C_{ox} profiles and Bt horizons as much as 1 to 2 m thick and maximum hues in the range of 10YR 5/4 and 6/4 through 7.5YR 6/4 to 4/4 and mature Bt horizons reaching 5YR 5/6). Includes:

Qof — **Old alluvial fan deposits (late to middle Pleistocene)**—Reddish brown, gravel and sand alluvial fan deposits; indurated, commonly slightly dissected. In places includes thin alluvial fan deposits of Holocene age

Qoa — **Old alluvial channel deposits (late to middle Pleistocene)**—Fluvial sediments deposited on canyon floors. Consists of moderately indurated, commonly slightly dissected gravel, sand, silt, and clay-bearing alluvium. Locally capped by thin, discontinuous alluvial deposits of Holocene age. Restricted to single occurrance north of Railroad Canyon Reservoir

VERY OLD SURFICIAL DEPOSITS—Sediments that are slightly to well consolidated to indurated, and moderately to well dissected. Upper surfaces are capped by moderate to well developed pedogenic soils (A/AB/B/C_{ox} profiles having Bt horizons as much as 2 to 3 m thick and maximum hues in the range of 7.5YR 6/4 and 4/4 to 2.5YR 5/6)

Qvof — **Very old alluvial fan deposits (middle to early Pleistocene)**—Mostly well-dissected, well-indurated, reddish-brown alluvial fan deposits. Grain size chiefly sand and gravel

Qvoa — **Very old alluvial channel deposits (middle to early Pleistocene)**—Fluvial sediments deposited on canyon floors. Consists of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt, and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age. Deposits in Quail Valley area contain rounded cobbles

Kgb — **Gabbro (Cretaceous)**—Mainly hornblende gabbro. Includes Virginia quartz-norite and gabbro of Dudley (1935), and San Marcos gabbro of Larsen (1948). Typically brown-weathering, medium-to very coarse-grained hornblende gabbro; very large poikilitic hornblende crystals are common, and very locally gabbro is pegmatitic. Much is quite heterogeneous in composition and texture. Includes noritic and dioritic composition rocks

Kdvg — **Granodiorite to tonalite**—Relatively uniform, massive hornblende biotite granodiorite grading into tonalite. Principal rock type of Domenigoni Valley pluton. Contains some mafic rich rocks in southern part of pluton. Common accessory minerals are zircon, sphene, apatite, and magnetite-ilmenite. Minute rutile crystals impart bluish opalescence to quartz. Small masses of epidote and (or) tourmaline rock occur locally and appear to replace granodiorite to tonalite. Contains moderately abundant to abundant equant mafic inclusions. Zircon age is 117.8 Ma_{id} and 112.8 Ma_{ip} (pers comm W. Premo) and $^{40}Ar/^{39}Ar$ age of 104 Ma for biotite and 95.5 Ma for potassium feldspar

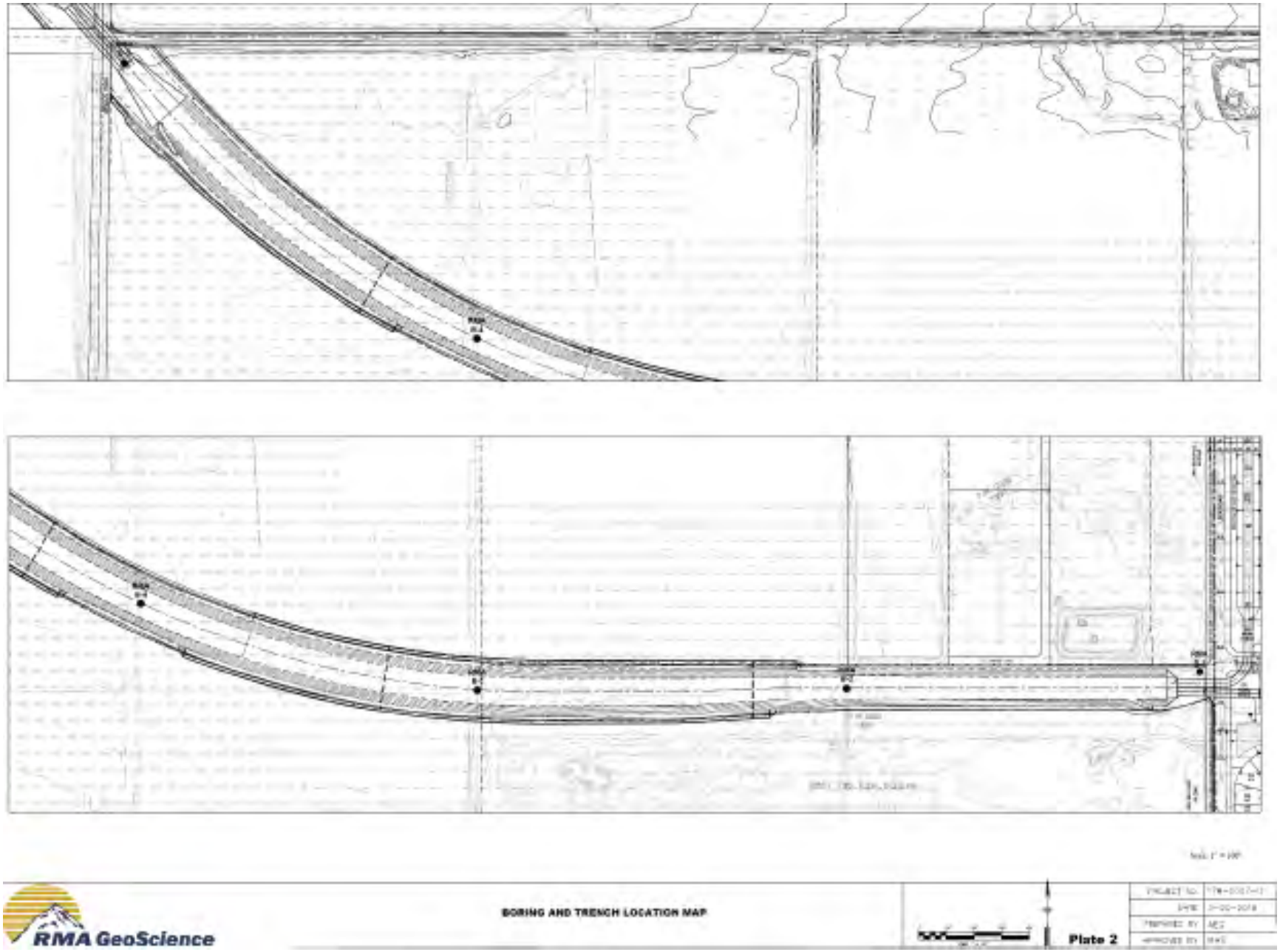
Mrq — **Quartz-rich rocks (Mesozoic)**—Quartzite and quartz-rich metasandstone

Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 4.3-4a
BORING LOCATIONS FOR THE RESIDENTIAL PROJECT SITE COMPONENTS

Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 4.3-4b
BORING LOCATIONS FOR THE OFF-SITE PROJECT COMPONENTS



Source: Subchapter 8.3 of this DEIR, Initial Study

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4.3.2.4 Regulatory Setting

4.3.2.4.a Federal

Farmland Protection Policy Act

The Natural Resources Conservation Service (NRCS), a federal agency within the United States Department of Agriculture, is the agency primarily responsible for implementation of the Farmland Protection Policy Act (FPPA). The purpose of the FPPA is to minimize federal programs' contribution to the conversion of farmland to non-agricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. The NRCS provides technical assistance to federal agencies, state and local governments, tribes, or nonprofit organizations that desire to develop farmland protection programs and policies.

The NRCS summarizes FPPA implementation in an annual report to Congress. The FPPA also established the Farmland Protection Program and Land Evaluation and Site Assessment.

Farmland Protection Program

The NRCS administers the Farmland Protection Program, a voluntary program aimed at keeping productive farmland in agricultural uses. Under the program, the NRCS provides matching funds to state, local, or tribal government entities and nonprofit organizations with existing farmland protection programs to purchase conservation easements. The goal of the program is to protect between 170,000 and 340,000 acres of farmland per year. Participating landowners agree not to convert the land to non- agricultural use and retain all rights to use the property for agriculture. A minimum of 30 years is required for conservation easements and priority is given to applications with perpetual easements. The NRCS provides up to 50 percent of the fair market value of the easement being conserved.

To qualify for a conservation easement, farmland must meet the following criteria:

- Prime, unique, or other productive soil, as defined by the NRCS based on factors such as water moisture regimes, available water capacity, developed irrigation water supply, soil temperature range, acid-alkali balance, water table, soil sodium content, potential for flooding, erodibility, permeability rate, rock fragment content, and soil-rooting depth;
- Included in a pending offer to be managed by a nonprofit organization, state, tribal, or local farmland protection program;
- Privately owned;
- Placed under a conservation plan;
- Large enough to sustain agricultural production;
- Accessible to markets for the crop that the land produces; and
- Surrounded by parcels of land that can support long-term agricultural production.

4.3.2.4.b State

California Department of Conservation

The Department of Conservation administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program, the Williamson Act Easement Exchange Program, and the Farmland Mapping and Monitoring Program (FMMP). These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The Department of Conservation is responsible for approving Williamson Act Easement Exchange Program agreements.

Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The Important Farmland Inventory System initiated in 1975 by the U.S. Soil Conservation Service (now NRCS) classifies land based on 10 soil and climatic characteristics. The FMMP is a similar system of mapping and monitoring the Department of Conservation established in 1980.

Under CEQA, the lead agency is required to evaluate agricultural resources in environmental assessments at least in part based on the FMMP. The State's system was designed to document how much agricultural land in California was being converted to non-agricultural land or transferred into Williamson Act contracts.

According to "Map My County," and as illustrated on **Figure 4.3-2, *Farmland Designations***, the Residential Project site (approximately 158 acres) is designated as either farmland of state importance, prime farmland, or farmland of local importance. The farmland of state importance comprises 100.7 gross acres, prime farmland comprises 57.2 gross acres, and farmland of local importance comprises 0.3 acres.

The Off-site Project components are zoned R-R (Rural Residential) and A-1-5 (Light Agriculture, 5-acre minimum lot size. The off-site Project components will not affect farmland to the same degree that the on-site Project components will and, therefore, are not included on **Figure 4.3-2**. Off-site components include General Plan Circulation Element roadways improvements and area drainage facilities, which will have limited impacts to farmland.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a non-mandated state program administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. The Williamson Act authorizes local governments and property owners to (voluntarily) enter into contracts to commit agricultural land to specified uses for 10 or more years. Once restricted, the land is valued for taxation based on its agricultural income rather than unrestricted market value, resulting in a lower tax rate for owners. In return, the owners guarantee that these properties remain under agricultural production for an initial 10-year period. The contract is renewed automatically unless the owner files a notice of nonrenewal, thereby maintaining a constant 10-year contract.

Currently, approximately 70 percent of the state's prime agricultural land is protected under this Act. Participation is on a voluntary basis by both landowners and local governments and is implemented through the establishment of agricultural preserves and the execution of Williamson Act contracts.

Termination of a Williamson Act contract through the nonrenewal process is the preferred method to remove the enforceable restriction of the contract. Cancellation is not appropriate when objectives served by cancellation could be served by nonrenewal. Cancellation is reserved for unusual, "emergency" situations. In order to approve tentative cancellation, a board or council must make specific findings based on substantial evidence that a cancellation is consistent with the purposes of the act or in the public interest. Contracts can specify that both findings must be made in order to approve tentative cancellation.

No Williamson Act contracts are active for the proposed Residential Project site or for the Off-site Project components area.

Assembly Bill 2881 – Right-to-Farm Disclosure

Assembly Bill (AB) 2881 was passed by the State Legislature in 2008 and became effective January 1, 2009. This bill requires that as a part of real estate transactions, land sellers and agents must disclose whether the property is located within 300' of farmland so designated on the most recent Important Farmland Map. The sale of a house located within 300' from land identified on the map as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land, triggers the disclosure requirement.

4.3.2.4.c County

Riverside County Right-to-Farm Ordinance

Ordinance No. 625 "An Ordinance of the County of Riverside Providing a Nuisance Defense for Certain Agricultural Activities, Operations, and Facilities and Providing the Public Notification Thereof," is called the Riverside County "Right-to-Farm Ordinance." It conserves, protects, and encourages the development, improvement, and continued viability of agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the county's residents. The Right-to-Farm Ordinance also attempts to balance the rights of farmers to produce food and other agricultural products with the rights of nonfarmers who own, occupy, or use land within or adjacent to agricultural areas. It is the intent of this ordinance to reduce the loss to the county of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. Prospective buyers of property located within 300' of agricultural land shall be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the County's Right-to-Farm ordinance.

4.3.2.4.d General Plan Goals and Policies

The following goals and policies related to Agriculture are outlined in the General Plan:

Agriculture

- **Policy OS 7.3** Encourage conservation of productive agricultural lands and preservation of prime agricultural lands.
- **Policy OS 7.5**: Encourage the combination of agriculture with other compatible open space uses in order to provide an economic advantage to agriculture. Allow by right, in areas designated Agriculture, activities related to the production of food and fiber, and support uses incidental and secondary to the on-site agricultural operation.

Land Use

- **Policy LU 28.6** Require setbacks and other design elements to buffer residential units to the extent possible from the impacts of abutting agricultural, roadway, commercial and industrial uses.

4.3.2.4.e Sun City/Menifee Valley Area Plan

- **Policy SCMVAP 2.1** Residential development in this area shall retain its existing estate density and rural character.

4.3.2.4.f Harvest Valley/Winchester Area Plan

The Harvest Valley/Winchester Area Plan (HVWAP) does not contain any policies relevant to agriculture.

4.3.3 Thresholds of Significance

As discussed in Section 4.3.1, the Project impacts to four (4) criteria pertaining to agriculture resources will be analyzed. According to the IS, the Project would have a significant impact if it would:

4. Agriculture.
   a. 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?
   b. Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?
   c. Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (*Ordinance No. 625 "Right-to-Farm*")?
   d. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the County's IS. The potential agriculture resources changes in the environment are addressed in response to the above thresholds in the following analysis.

4.3.4 Potential Impacts

THRESHOLD 4.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?

Less Than Significant Impact

The California Department of Conservation's (CDC) Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to track changes in agricultural land use and to help preserve areas of Important Farmland. It divides the state's land into eight categories based on soil quality and existing agricultural uses to produce maps and statistical data. These are used to help preserve productive farmland and to analyze impacts on farmland. Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are all Important Farmland and are collectively referred to as Important Farmland in this Initial Study. The highest rated Important Farmland is Prime Farmland. Farmland maps are updated and released every two years.

According to "Map My County," and as illustrated on **Figure 4.3-2, *Farmland Designations***, the Residential Project site (approximately 158 acres) is designated as either farmland of state importance, prime farmland, or farmland of local importance. The farmland of state importance comprises 100.7 gross acres, prime farmland comprises 57.2 gross acres, and farmland of local importance comprises 0.3 acres.

The Off-site Project components are zoned R-R (Rural Residential) and A-1-5 (Light Agriculture, 5-acre minimum lot size. The off-site Project components will not affect farmland to the same degree that the on-site Project components will and, therefore, are not included on **Figure 4.3-2**. Off-site components include General Plan Circulation Element roadways improvements and area drainage facilities, which will have limited impacts to farmland.

The Project will use land for non-agricultural uses. The existing General Plan Land Use designations for the Project components are Medium Density Residential (MDR) and Estate Density Residential (EDR). Neither of these are agricultural General Plan Land use designations. The existing General Plan designations do not provide for agricultural use and no change to the existing General Plan designations is required to develop the proposed Project.

According to the General Plan (p. LU-4): "Community Development – identifies those areas appropriate for urban or suburban development, including areas for single family and multiple family residential uses, commercial, industrial, business park, public facilities, and a mix of uses." This definition does not include any agricultural uses. The Project site has had both Community Development Foundation Component and residential designations since the adoption of the General Plan in 2003 (approximately 17 years ago).

Based on the analysis above, any impacts from the Project that would convert Farmland of Local Importance, Prime Farmland, Farmland of Statewide Importance, and Unique Farmland, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to a non-agricultural use will be less than significant.

THRESHOLD 4.b: Would the Project conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?

Less Than Significant Impact

Residential Project Site

The Project will conflict with the current agricultural use; however, the current General Plan and General Plan EIR anticipated this conflict. The Project site is within Foundation Component of Community Development, which anticipates residential development on this site. The Residential Project site is located on two parcels with a R-1 zoning classification. The Project proposes to change this zoning classification to R-4 (Planned Residential). Neither of these are an agricultural zoning classification. While the Project will conflict with the existing agricultural use, it will not conflict with any agricultural zoning. Impacts will be less than significant.

The Residential Project site is not located on land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve. No impacts will occur as it pertains to the Williamson Act contract or land within a Riverside County Agricultural Preserve.

Off-Site Project Components

The Off-site Project components are located on parcels classified as R-R and A-1-5, as well as within exiting roadway ROWs. The parcels classified as R-R and A-1-5 are used for cattle grazing. There is no proposal to change the zoning of the A-1-5 parcels.

The areas of the earthen drainage facilities will bifurcate the above referenced parcels; however, they will not preclude the continued use of the parcels for cattle grazing. Therefore, any impacts will be less than significant.

The Off-site Project components are not located on land subject to a Williamson Act contract or within a Riverside County Agricultural Preserve. No impacts will occur as it pertains to the Williamson Act contract or land within a Riverside County Agricultural Preserve.

THRESHOLD 4.c: Would the Project cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?

Less Than Significant Impact

Land zoned for "primarily agricultural purposes" means land lying within any one of the following zoning classifications established by County Land Use Ordinance No. 348:

- A-1 Zone (Light Agriculture);
- A-P Zone (Light Agriculture with Poultry);
- A-2 Zone (Heavy Agriculture);
- A-D Zone (Agriculture-Dairy); or
- C/V Zone (Citrus/Vineyard).

As stated in Section 4.3.2, the Residential Project site is located on two parcels with a current zoning classification of R-1, which the Project proposes to change to Planned Residential (R-4). The Off-site Project components are located on parcels zoned R-R and A-1-5 and are also located within exiting roadway ROW.

Leon Road establishes a demarcation between the R-1 (existing)/R-4 (proposed) Project site and the A-1-5 zoned parcels. The Project will cause development of non-agricultural uses within 300 feet of agriculturally zoned property and is subject to the Right-to-Farm Ordinance (Ord. No. 625).

The Right-to-Farm Ordinance requires prospective buyers of property located within one mile of farmland designated on the most recent Important Farmland Map, to be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities. Mitigation can be achieved using this disclosure method. **Standard Condition SC-AG-1** (see Section 4.3.5, below) requires disclosures as part of the sale of all homes proximate to agricultural uses, notifying future residents that they could be subject to inconvenience or discomfort resulting from accepted farming activities pursuant to the provisions of the County's Right-to-Farm Ordinance. The Project is also subject to the Right-to-Farm disclosure (AB 2881), effective January 1, 2009, which will protect adjacent Important Farmland from complaints by residential homeowners in the Project. The Right-to-Farm Ordinance requires land sellers and agents to disclose to buyers whether the property is located within 300' of farmland so designated on the most recent Important Farmland Map. The disclosure will advise homeowners through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the County's Right-to-Farm ordinance. This is a standard condition that would apply to any the property is located within 300' of farmland so designated on the most recent Important Farmland Map. Therefore, it is not considered unique mitigation under CEQA.

While the Project will cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm"), the General Plan and General Plan EIR anticipated this conflict. Any impacts will less than significant level with adherence to **Standard Condition SC-AG-1**.

THRESHOLD 4.d: 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?

Less Than Significant Impact with Mitigation Incorporated

The Project will convert those portions of the site planted in potatoes and cilantro to non-agricultural uses. Suburban, residential development on the Project site also has the potential to create conflicts with existing, adjacent agricultural uses. There may be pressure to convert adjacent, existing agricultural uses to a non-agricultural use primarily due to the odors and dust.

As discussed above in Threshold 4.c, above, the Project is also subject to the Right-to-Farm Ordinance, as discussed above. **Standard Condition SC-AG-1** (see Section 4.3.5) requires disclosures as part of the sale of all homes proximate to agricultural uses, notifying future residents that they could be subject to inconvenience or discomfort resulting from accepted farming activities pursuant to the provisions of the County's Right-to-Farm Ordinance. As

discussed in Section 4.3.2.3.c, above, the Project is also subject to the Right-to-Farm disclosure (AB 2881), effective January 1, 2009, which will protect adjacent Important Farmland from complaints by residential homeowners in the Project. The Right-to-Farm Ordinance requires land sellers and agents to disclose to buyers whether the property is located within 300' of farmland so designated on the most recent Important Farmland Map. The disclosure will advise homeowners through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the County's Right-to-Farm ordinance. This is a standard condition that would apply to any the property is located within 300' of farmland so designated on the most recent Important Farmland Map. Therefore, it is not considered unique mitigation under CEQA.

Mitigation can also be achieved by establishing a line of communication between the local farmers and future Project residents, once the homeowners have acknowledged the disclosures in **Standard Condition SC-AG-1** and are occupying their homes.

Mitigation Measure MM-AG-1 (see Section 4.3.5) requires the HOA to invite adjacent farm owners and operators to establish an ongoing line of communication where any conflicts that manifest in complaints from either side (residents or farmers) can be addressed/resolved. This will include education programs by the farmers to serve as a foundation for building trust between the two land uses. With establishment of communication between the two uses, conflicts, over the long term, can be managed.

With inclusion of **Standard Condition SC-AG-1**, and **Mitigation Measure MM-AG-1**, any impacts will be reduced to a less than significant level.

4.3.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The following will be implemented by the Project when future residents purchase property within the Project. This is a standard condition and is not unique this Project (or projects in a similar setting.

SC-AG-1 The Project shall comply with the Right-to-Farm Ordinance No. 625. Every home in the Project area shall include the following disclosures in the title report, which shall be delivered to the Buyer(s) before the close of escrow:

1. **The property is located within 1 mile of farmland as designated on the most recent Important Farmland Map; and**
2. **Residents could be subject to inconvenience or discomfort resulting from accepted farming activities.**

Mitigation Measure(s)

The following mitigation measures will be implemented by the Project to ensure communication between future residents and existing farmers:

MM-AG-1 **The Homeowner's Association (HOA) shall establish an agricultural interface committee and invite the adjacent farm owners/operators to be members of this committee. The purpose of this committee shall be to address/resolve the actual manifestation of conflicts between adjacent agricultural operations and urban uses, to foster trust between the farmers and the residents, and facilitate the education of urban residents and farmers. Project residents shall comply with the provisions in SC-AG-1 in the event a potential conflict cannot be resolved.**

4.3.6 Cumulative Impacts

As stated in the Initial Study, there is no timberland zoning on the Project site, nor is there any forest land on the Project site. Therefore the Project will not create any impacts (including cumulative impacts) to forestry resources due to a conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g)), the result in the loss of forest land or conversion of forest land to non-forest use, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

Based on the analysis above, the Project is not subject to the Williamson Act or within a Riverside County Agricultural Preserve. The Project will have a less than significant impact as it pertains to the conversion of 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, in a conflict with existing agricultural zoning or agricultural use, or cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm") (see **Standard Condition SC-AG-1)**.

Mitigation Measure MM-AG-1 has been included proposed to reduce conflicts between the Project and existing agricultural uses in proximity of the Project site (based on changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use) to a less than significant level.

Since the proposed Project will not have any significant adverse impact to agricultural or forestry resources or resource values, it cannot make a cumulatively considerable contribution to such resources or values. The Project's cumulative agricultural and forestry impacts are considered less than significant.

4.3.7 Unavoidable Significant Adverse Impacts

The proposed Project is not forecast to cause any significant adverse impacts to agricultural and/or forestry resources or resource values. No unavoidable significant impact to agricultural and/or forestry resources will result from implementing the proposed Project. The Project's impact to agricultural and/or forestry resources is a less than significant adverse impact.

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4.4 AIR QUALITY

4.4.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of air quality from implementation of the Project. The Air Quality Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

6. Air Quality Impacts.
   a. Conflict with or obstruct implementation of the applicable air quality plan?
   b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
   c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
   d. Expose sensitive receptors which are located within 1 mile of the project site to project substantial point source emissions?
   e. Involve the construction of a sensitive receptor located within one mile of an existing substantial point source emitter?
   f. Create objectionable odors affecting a substantial number of people?

Based on the analysis in the IS, it was determined that all six (6) issue areas related to air quality above (6.a. through 6.f.) **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. Issue area 6.b. was deleted; 6.c. became 6.b. and some text was deleted; 6.d. became 6.c. and some text was revised; 6.e. was deleted; 6.f. became 6.d. and some text was revised. The text revisions will be reflected in the DEIR and questions deleted from the (IS) checklist and will not be analyzed in the DEIR.

Therefore, the following four (4) issue areas will be analyzed in the DEIR:

6. Air Quality Impacts.
   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, which are located within one (1) mile of the project site, to substantial pollutant concentrations?
   d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

There are no standard conditions or mitigation measures presented in the IS that must be

carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis,* prepared by Urban Crossroads, Inc., February 27, 2019 (*AQ Impact Analysis,* **Appendix C**)
- *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, County of Riverside,* prepared by Urban Crossroads, June 5, 2018 (*TIA,* **Appendix K**)
- *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**)

Comment Letter(s) Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter #5: South Coast Air Quality Management District (SCAQMD) (dated 11/7/18) states:

This letter contains the following comments pertaining to the analysis of air quality and greenhouse gas emissions for the Project:

- Send directly to SCAQMD for review: the DEIR, the technical appendices for Air Quality (AQ) and Greenhouse Gases (GHG), including electronic versions of all air quality modeling and health risk assessment files, emission calculation spreadsheets and modeling input/output files.
- Use the SCAQMD CEQA Handbook and CalEEMod land use emissions software to forecast Project emissions.
- Quantify criteria pollutant emissions and compare the results to SCAQMD's regional pollutant emissions significance thresholds to determine air quality impacts.
- Calculate localized air quality impacts (using localized significance thresholds developed by SCAQMD or by performing dispersion modeling) and compare the results to SCAQMD's localized significance thresholds.
- Identify potential adverse air quality impacts for all phases of the Project (including demolition, if any, construction and operations) and for all Project-related air pollutant sources.
- Analyze air quality impacts from indirect sources, such as sources that generate or attract vehicular trips.
- If the Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment, including the analysis of toxic air contaminant impacts.
- Assess air quality impacts associated with the siting of incompatible land uses (such as placing sensitive receptors near air pollution sources, or vice versa).
- Identify mitigation measures and identify any impacts that would result from their implementation.
- If the Project generates significant adverse air quality impacts, discuss a reasonable range of potentially feasible alternatives in sufficient detail to allow a meaningful evaluation, analysis and comparison with the Project. Include a "no project" alternative, and alternatives to the Project or its location that will avoid or substantially lessen any significant effects.
- If the Project requires a permit from the SCAQMD, identify SCAQMD as a Responsible

Agency under CEQA.

Response: The DEIR, the technical appendices for Air Quality (AQ) and Greenhouse Gases (GHG), including electronic versions of all air quality modeling and health risk assessment files, emission calculation spreadsheets, and modeling input/output files will be sent to SCAQMD for their review and comments during the public review period for the DEIR, as requested. The SCAQMD CEQA Handbook and CalEEMod land use emissions software were used to forecast Project emissions in the analysis below. Criteria pollutant emissions were quantified and compared to the results to SCAQMD's regional pollutant emissions significance thresholds to determine air quality impacts in the analysis below. Localized air quality impacts were Calculate (using localized significance thresholds developed by SCAQMD) and were compared to the results to SCAQMD's localized significance thresholds in the analysis below. Potential adverse air quality impacts were identified for all phases of the Project (including demolition, if any, construction and operations) and for all Project-related air pollutant sources in the analysis below. Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips were analyzed. A toxic air contaminant impact analysis was not required and is discussed below. Air quality impacts associated with the siting of incompatible land uses were assessed in the analysis below (such as placing sensitive receptors near air pollution sources, or vice versa). Mitigation measures were identified and any impacts that would result from their implementation were also identified in the analysis below (as applicable). A reasonable range of potentially feasible alternatives to the Project is discussed in Subchapter 5 of this DEIR. It is noted that if the Project requires a permit from the SCAQMD, identify SCAQMD as a Responsible Agency under CEQA.

No comments regarding air quality resources were received at the Scoping Meeting held on November 5, 2018.

Therefore, the issues identified in 6.a. through 6.d. above, and the issues identified in the NOP/IS (summarized above), are the focus of the following air quality evaluation.

All the Tables and Figures in this Subchapter are from the *AQ Impact Analysis*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical study, which is provided in Volume 2 of the DEIR, the Technical Appendices.

4.4.2 Environmental Setting

4.4.2.1 Existing Conditions

4.4.2.1.a Regional Setting (South Coast Air Basin)

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of 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 SCAB is a 6,745-square mile sub-region of the SCAQMD, which includes portions of Los

Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger SCAQMD boundary includes 10,743 square miles.

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.

4.4.2.1.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. 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.

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.

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.

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 14½ hours of possible sunshine.

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.

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.

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.

4.4.2.1.c Wind Patterns and Project Location

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

Wind patterns across the south coastal region are characterized by westerly and southwesterly 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.

4.4.2.1.d Existing Air Quality

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated and 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 4.4-1**, ***Ambient Air Quality Standards***.

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 4.4-1**.

Table 4.4-1 (1 of 2)
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 ...

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Table 4.4-1 (2 of 2)
Ambient Air Quality Standards

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.

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4.4.2.1.e 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 effects are identified below:

Ozone

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.

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 sports and live in communities with high ozone levels.

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

Carbon Monoxide

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 Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

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

with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

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

Particulate Matter

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

Particulate Matter less than 2.5 microns ($PM_{2.5}$) 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 release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.

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 an increased mortality from lung cancer.

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

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

Nitrogen Dioxide

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 regional monitors.

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 air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

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

Sulfur Dioxide

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).

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, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

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

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

Lead

Lead (Pb) is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

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.

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.

Volatile Organic Compounds

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.

Reactive Organic Gases (ROG) are similar to VOC and are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, 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.

4.4.2.1.f Regional Air Quality

The SCAQMD monitors levels of various criteria pollutants at 38 permanent monitoring stations and 5 single-pollutant source Lead (Pb) air monitoring sites throughout the air district. In 2015, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM_{10}, and $PM_{2.5}$ at most monitoring locations. No areas of the SCAB exceeded federal or state standards for NO_2, SO_2, CO, sulfates or lead. Reference

Table 4.4-2, *Attainment Status of Criteria Pollutants in the SCAB*, for attainment designations for the SCAB.

Table 4.4-2
Attainment Status of Criteria Pollutants in the SCAB

Criteria Pollutant	State Designation	Federal Designation
Ozone – 1 hour standard	Nonattainment	Nonattainment ("extreme")
Ozone – 8 hour standard	Nonattainment	Nonattainment ("extreme")
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment ("serious")
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassifiable/Attainment
Sulfur Dioxide	Attainment	Unclassifiable/Attainment
Lead (Pb)	Attainment	Nonattainment (Partial)

4.4.2.1.g Local Air Quality

Relative to the Project site, the nearest long-term air quality monitoring site for Ozone (O_3) and particulate matter ≤ 10 microns (PM_{10}) is the Perris Valley monitoring station (SRA 24) located approximately 10.7 miles northwest of the Project site. Data for Carbon Monoxide (CO) and Nitrogen Dioxide (NO_2) were taken from the Elsinore Valley monitoring station (SRA 25), which is located approximately 12.2 miles southwest of the Project site. Data for Particulate matter ≤ 2.5 microns ($PM_{2.5}$) data was taken from the Metropolitan Riverside County 2 monitoring station (SRA 23), located approximately 29.4 miles northwest of the Project site.

The most recent three (3) years of data available is shown on **Table 4.4-3, *Project Area 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. Additionally, data for SO_2 has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO_2 concentrations.

Table 4.4-3
Project Area Air Quality Monitoring Summary 2015-2017

Pollutant	Standard	Year		
		2015	2016	2017
Ozone				
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		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
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration	> 35 ppm	0.8	2.0	--
Maximum 8-Hour Concentration	> 20 ppm	0.6	1.4	--
Nitrogen Dioxide (NO_2)				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.047	0.051	0.049
Maximum State 1-Hour Concentration	> 0.18 ppm	0.047	0.051	0.049
Annual Federal Standard Design Value		9	8	8
Annual State Standard Design Value		8	8	8
Number of Days Exceeding Federal 1-Hour Standard	> 0.18 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 150 µg/m^3	188.0	76.0	75.4
Maximum State 24-Hour Concentration (µg/m^3)	> 50 µg/m^3	178.0	--	--
Annual Federal Arithmetic Mean (µg/m^3)		33.1	32.2	32.6
Annual State Arithmetic Mean (µg/m^3)	20 µg/m^3	33.0	--	--
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m^3	1	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m^3	4	--	--
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)				
Maximum State 24-Hour Concentration (µg/m^3)		41.7	31.5	27.2
Annual State Arithmetic Mean (µg/m^3)		--	9.7	11.3

4.4.2.1.h Regulatory Setting (Background)

Federal Air Quality Regulations

The U.S. EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and Pb. The U.S. EPA has jurisdiction over emissions sources that are under the

authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

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

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I, the Non-Attainment Provisions, and Title II, the Mobile Source Provisions. Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. **Table 4.4-1, *Ambient Air Quality Standards***, above, provides the NAAQS within the Basin.

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

California Regulations

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (Clean Air Act), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

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

Non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

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

4.4.2.1.i Air Quality Management Planning

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

4.4.2.1.j Existing Project Site Air Quality Conditions

Existing air quality conditions at the Project site would generally reflect ambient monitored conditions as presented previously at **Table 4.4-3**, ***Project Area Air Quality Monitoring Summary 2015-2017***.

4.4.2.1.k Riverside County General Plan Goals and Policies

Following are the applicable General Plan Air Quality Goals and Policies:

- **Goal OSC-9** Reduced impacts to air quality at the local level by minimizing pollution and particulate matter.
- **Policy OSC-9.1** Meet state and federal clean air standards by minimizing particulate matter emissions from construction activities.
- **Policy OSC-9.2** Buffer sensitive land uses, such as residences, schools, care facilities, and recreation areas from major air pollutant emission sources, including freeways, manufacturing, hazardous materials storage, wastewater treatment, and similar uses.
- **Policy OSC-9.3** Comply with regional, state, and federal standards and programs for control of all airborne pollutants and noxious odors, regardless of source.
- **Policy OSC-9.5** Comply with the mandatory requirements of Title 24 Part 11 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building and Energy Efficiency Standards.

4.4.3 Thresholds of Significance

As discussed in Section 4.4.1, the Project impacts to four (4) criteria pertaining to air quality will

be analyzed. According to the IS, the Project would have a significant impact if it would:

6. Air Quality Impacts.
   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, which are located within one (1) mile of the project site, to substantial pollutant concentrations?
   d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the County's IS.

The SCAQMD has also developed regional and localized significance thresholds (LSTs) for other regulated pollutants, as summarized in **Table 4.4-4, *Maximum Daily Emissions Thresholds***. The SCAQMD's CEQA Air Quality Significance Thresholds (March 2015) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Table 4.4-4
Maximum Daily 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
Localized Thresholds		
Phase 1 and 2		
NO_x	336 lbs./day (Mass Grading)	N/A
	176 lbs./day (Site Preparation Phases 1 & 2)	
CO	2,738 lbs./day (Mass Grading)	N/A
	1,269 lbs./day (Site Preparation Phases 1 & 2)	
PM_{10}	48 lbs./day (Mass Grading)	N/A
	20 lbs./day (Site Preparation Phases 1 & 2)	
$PM_{2.5}$	13 lbs./day (Mass Grading)	N/A
	6 lbs./day (Site Preparation Phases 1 & 2)	

The potential air quality changes in the environment are addressed in response to the above thresholds in the following analysis.

4.4.4 Potential Impacts

Environmental impacts and mitigation measures detailed in this subchapter do not relate to maintenance of flood control facilities. This type of maintenance occurs infrequently, and impacts to air quality are less than significant, no mitigation is required.

THRESHOLD 6.a: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Significant and Unavoidable Impact

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.

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.

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 Regional Transportation Plan/Sustainable Communities Strategy (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.

The Project's consistency with the AQMP will be determined using the 2016 AQMP as discussed below.

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

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

Construction Impacts

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. The Project would not exceed the applicable LST thresholds or regional significance thresholds for construction activity after implementation of **Mitigation Measure MM-AQ-1**. Therefore, the Project would not conflict with the AQMP according to this criterion.

Operational Impacts

The Project regional analysis demonstrates that Project operational-source emissions has the potential to exceed applicable regional significance thresholds for operational activities from VOCs and NO_x. As such, the Project has the potential to result in or cause violations of the

CAAQS and NAAQS. On the basis of the preceding discussion, the Project is determined to potentially conflict with the first criterion.

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

Overview

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 Southern California Association of Governments (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 County of Riverside General Plan (referred to as the "General Plan") is considered to be consistent with the AQMP.

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.

Operational Impacts

The General Plan currently designates the Project site as "Medium Density Residential (MDR)". MDR land uses allow for detached single family detached and attached residential dwelling units with a density ranging from 2 dwelling unit per acre to 5 dwelling unit per acre.

The Project proposes to construct 574 single family residential dwelling units and an 8.2-acre park which is consistent with the land use designation. Notwithstanding, Project operational source emissions have the potential to exceed the threshold of significance and therefore, the Project will conflict with the goals and objectives of the AQMP. Impacts related to flood control facility maintenance are less than significant and no mitigation is required.

Conclusion

The Project has the potential to result in or cause NAAQS or CAAQS violations. The proposed Project, however, is consistent with the land use and growth intensities reflected in the adopted General Plan. Notwithstanding, Project operational-source emissions have the potential to exceed the applicable regional thresholds of significance. Therefore, the Project will conflict with the goal and objectives of the AQMP and have a potentially significant impact with respect to this threshold. Even with the incorporation of standard requirements and Mitigation Measures, impacts will be significant and unavoidable.

THRESHOLD 6.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 and Unavoidable Impact

This impact is related to regional criteria pollutant impacts. The nonattainment regional pollutants of concern are ozone, PM_{10}, and $PM_{2.5}$. Ozone is not emitted directly into the air but is a regional pollutant formed by photochemical reactions in the atmosphere. Ozone precursors, VOC and NO_x, react in the atmosphere in the presence of sunlight to form ozone. Therefore, the SCAQMD does not have a recommended ozone threshold, but it does have thresholds of significance for VOC and NO_x.

The proposed Project would generate regional criteria air pollutant and ozone precursor emissions resulting from short-term construction and long-term operational activities. SCAQMD has developed regional thresholds of significance for both construction and operational emissions. These thresholds are considered the allowable emissions limit for each project in order for the region to attain and maintain ambient air quality standards. Therefore, a project that would not generate daily regional emissions that exceed SCAQMD's thresholds would also not violate or contribute substantially to an existing or projected air quality violation. The Project's regional construction and operational emissions, which include both on-site and off-site emissions, are evaluated separately below.

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 pollutant (NOx, VOC, PM10, PM2.5, SOx, and CO) 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 the Project to determine construction and operational air quality emissions.

<u>Construction Emissions</u>

Construction emissions are described as "short-term" or temporary in duration; however, they have the potential to represent a significant impact with respect to air quality. Construction of the Project would result in the temporary generation of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions. Construction related emissions are expected from the following construction activities:

- Mass Grading;
- Site Preparation;
- Building Construction;
- Paving;
- Architectural Coating; and
- Off-site Improvements.

Construction Duration

Construction for Phase 1 is expected to commence in April 2018 and will last through December 2021. Construction for Phase 2 is expected to commence in January 2022 and last through June 2025. There is potential for construction during Phase 1 and Phase 2 to overlap. To account for the overlap, the construction schedule has been modified to accordingly so that

Phase 1 Building Construction, Paving, and Architectural Coatings would overlap with Phase 2 Site Preparation activities. Construction duration by phase is shown on **Table 4.4-5, *Construction Duration***. Although the construction start day has already passed, the April 2018 start date utilized in this analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. No updates to CalEEMod would alter these impact determinations today. The determinations would be the same if construction started in 2018 as 2020. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines.

Table 4.4-5
Construction Duration

Phase Name	Start Date	End Date	Days
Phase 1			
Mass Grading	04/01/2018	11/02/2018	155
Site Preparation	11/03/2018	01/25/2019	60
Building Construction	01/26/2019	12/10/2021	750
Paving	07/31/2021	12/31/2021	110
Architectural Coating	07/31/2021	12/31/2021	110
Phase 2			
Site Preparation	12/03/2021	01/27/2022	40
Building Construction[3]	01/28/2022	05/16/2024	600
Paving	05/17/2024	08/29/2024	75
Architectural Coating	08/30/2024	12/12/2024	75

Construction Equipment

Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity was based on CalEEMod 2016.3.2 defaults as well as similar projects in order to be consistent with the Projects Opening Year. Construction equipment for all phases with the exception of Building Construction, are based CalEEMod 2016.3.2 defaults. Building Construction equipment has been proportionally increased since the number of days during Building Construction was adjusted to meet the 2021 and 2025 Opening Years. Specific detailed modeling inputs/outputs are contained in the Appendix 3.2 of the *AQ Impact Analysis*.

A detailed list of construction equipment assumptions by phase is provided in **Table 4.4-6**, ***Construction Equipment***.

Table 4.4-6
Construction Equipment

Activity	Equipment	Number	Hours Per Day
Mass Grading			
Mass Grading	Graders	1	8
	Rubber Tired Dozers	2	8
	Scrapers	4	8
Phase 1 and 2			
Site Preparation	Rubber Tired Dozers	1	8
	Tractors/Loaders/Backhoes	1	8
Building Construction	Cranes	2	8
	Forklifts	6	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
Paving	Paving Equipment	2	8
	Rollers	2	8
	Pavers	2	8
Architectural Coating	Air Compressors	1	8

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. According to information provided by the client, the Project site is expected to be balanced therefore no import/export will be required.

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 from the Project proponent and the CalEEMod model.

Off-Site Construction-Emissions

Construction emissions associated with off-site utility improvements would occur as part of the Project. Channel, sewer line, and lift station improvements would occur outside of the Project boundary. Although a specific schedule of off-site utility and infrastructure improvements is unknown, based upon the Air Quality consultants' extensive experience in analyzing off-site

utility improvements for similar types of projects, the impacts associated with these expected activities are not expected to exceed the daily emission quantities identified for Project-related construction activities. As such, no impacts associated with off-site utility improvements beyond what has already been identified in this report, are expected to occur. The analysis herein is conservative and anticipates operation of several pieces of equipment that would be operating at any given time period, during off-site utility improvements, the disturbance areas would be limited and less than what is evaluated for the Project site.

Construction Emissions

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) and Rule 403 (Fugitive Dust). These are included as **Standard Condition SC-AQ-1**, and **Standard Condition SC-AQ-2**, respectively (see Section 4.4.5).

Construction Impacts Without Mitigation

Table 4.4-7, ***Emissions Summary of Overall Construction (Without Mitigation)***, presents the Project's maximum daily construction emissions for each construction activity and during the entire construction duration using the worst-case summer or winter daily construction-related criteria pollutant emissions for each phase of construction. Detailed construction model outputs are presented Appendix 3.1 and 3.2 of in *AQ Impact Analysis*.

Maximum daily emissions of NO_x, PM_{10}, and $PM_{2.5}$ are expected to occur in 2018. Although overlap in construction activities is expected to occur in 2021, the majority of construction-source NO_x emissions would be generated from the hauling of soil during mass grading activities. The maximum daily emissions for VOCs, CO, and SO_x are expected to occur in 2021 when Phase 1 Building Construction, Paving, and Architectural Coating activities are expected to overlap with Phase 2 Site Preparation activities. As shown in **Table 4.4-7**, emissions resulting from the Project construction has the potential to exceed numerical thresholds established by the SCAQMD for emissions of VOCs.

Table 4.4-7
Emissions Summary of Overall Construction (Without Mitigation)

Year	Emissions (pounds per day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
2018	7.55	89.09	46.54	0.09	10.45	6.23
2019	6.76	56.78	48.42	0.11	6.40	3.67
2020	6.10	51.54	46.57	0.11	6.00	3.26
2021	186.13	74.70	70.57	0.15	10.24	5.76
2022	4.10	36.10	37.93	0.07	2.95	1.96
2023	3.78	32.83	37.40	0.07	2.72	1.74
2024	211.39	30.78	37.07	0.07	2.53	1.57
Maximum Daily Emissions	**211.39**	**89.09**	**70.57**	**0.15**	**10.45**	**6.23**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**YES**	**NO**	**NO**	**NO**	**NO**	**NO**

Construction Impacts with Mitigation

The estimated maximum daily construction emissions with mitigation are summarized in **Table 4.4-8, *Emissions Summary of Overall Construction (With Mitigation)***. Detailed construction model outputs are presented in Appendix 3.2 and 3.4 of the *AQ Impact Analysis*.

Mitigation Measure MM-AQ-1 will be implemented in order to reduce the severity of the VOC impacts. **Mitigation Measure MM-AQ-1** requires the Project to utilize "Super-Compliant" low VOC paints for the building envelope application which have been reformulated to exceed the regulatory VOC limits put forth by SCAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10g/L of VOC. Alternatively, the Project may utilize building materials that do not require the use of architectural coatings.

Table 4.4-8
Emissions Summary of Overall Construction (With Mitigation)

Year	Emissions (pounds per day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
2018	7.55	89.09	46.54	0.09	10.45	6.23
2019	6.76	56.78	48.42	0.11	6.40	3.67
2020	6.10	51.54	46.57	0.11	6.00	3.26
2021	44.12	74.70	70.57	0.15	10.24	5.76
2022	4.10	36.10	37.93	0.07	2.95	1.96
2023	3.78	32.83	37.40	0.07	2.72	1.74
2024	42.53	30.78	37.07	0.07	2.53	1.57
Maximum Daily Emissions	**44.12**	**89.09**	**70.57**	**0.15**	**10.45**	**6.23**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

As shown in **Table 4.4-7**, ***Emissions Summary of Overall Construction (With Mitigation)***, the Project's regional daily construction emissions would not exceed any of SCAQMDs thresholds of significance. Therefore, short-term construction emissions would not violate or contribute substantially to an existing or projected air quality violation. After implementation of **Mitigation Measure MM-AQ-1**, Project construction-source emissions will be less than significant.

Operational Emissions

Operational activities associated with the proposed Project will result in emissions of CO, VOCs, NO_x, SO_x, 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. These are discussed in greater detail, below.

Area Source Emissions

- Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model.

- 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 use of consumer products

were calculated based on defaults provided within the CalEEMod model.

- Hearths/Fireplaces

The emissions associated with 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.

- 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.

Energy Source Emissions

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 offsite 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 model.

Mobile Source Emissions

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project related operational air quality impacts derive primarily from vehicle trips generated by the Project.

Operational Emissions Summary

The estimated operation-source emissions are summarized on **Table 4.4-9**, ***Maximum Daily Operational Emissions Summary***, below. During Phase 1, the Project has the potential to exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs. During Phase 2, the Project will exceed the thresholds of significance for emissions of VOCs and NO_x. Detailed construction model outputs are presented in Appendix 3.5 and 3.6 of the *AQ Impact Analysis*.

Table 4.4-9
Maximum Daily Operational Emissions Summary

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Phase 1						
Area Source	68.56	5.56	28.45	0.04	0.57	0.57
Energy Source	0.29	2.45	1.04	0.02	0.20	0.20
Mobile	6.14	44.08	73.80	0.31	22.36	6.12
Total Maximum Daily Emissions	**74.99**	**52.09**	**103.29**	**0.36**	**23.13**	**6.89**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**NO**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Summer Scenario	**Emissions (pounds per day)**					
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 + Phase 2						
Area Source	24.14	10.07	51.51	0.06	1.03	1.03
Energy Source	0.52	4.43	1.87	0.03	0.36	0.36
Mobile	11.10	79.62	133.33	0.55	40.40	11.06
Total Maximum Daily Emissions	**135.75**	**94.12**	**186.73**	**0.64**	**41.79**	**12.45**
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}**	**$PM_{2.5}$**
Phase 1						
Area Source	68.56	5.56	28.45	0.04	0.57	0.57
Energy Source	0.29	2.45	1.04	0.02	0.20	0.20
Mobile	5.22	44.15	63.80	0.28	22.36	6.13
Total Maximum Daily Emissions	**74.07**	**52.16**	**93.29**	**0.33**	**23.13**	**6.89**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**NO**	**NO**	**NO**	**NO**	**NO**
Phase 1 + Phase 2						
Area Source	124.14	10.07	51.51	0.06	1.03	1.03
Energy Source	0.52	4.43	1.89	0.03	0.36	0.36
Mobile	9.42	79.76	115.25	0.51	40.40	11.07
Total Maximum Daily Emissions	**134.08**	**94.26**	**168.65**	**0.60**	**41.79**	**12.46**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**

Mitigation Measure MM-GHG-1 shall be implemented to reduce operational source (VOC) emissions. 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. No feasible mitigation measures exist that would reduce this impact to less than significant levels.

Additionally, over 84 percent of the Project's NO_x emissions are derived from vehicle usage. Vehicles – and their resulting emissions – are generally controlled through various state and federal laws and regulations, as well as the Air Resources Board; thus these emissions do not represent the types of impacts that can be mitigated by a local lead agency under CEQA. Since the Project does not have regulatory authority to control tailpipe emissions, no feasible mitigation measures beyond what is contained in **Mitigation Measure MM-GHG-1** that would reduce NO_x emissions to levels that are less than significant. Therefore, these emissions are considered significant and unavoidable.

According to the *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**), as noted in the Brief of Amicus Curiae (*Brief*) by the South Coast Air Quality Management District (SCAQMD) in the Friant Ranch case, SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes.

The SCAQMD discusses that it may be infeasible to quantify health risks caused by projects similar to the proposed Project, due to many factors. It is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). The *Brief* states that it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s))[1]. Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk--it does not necessarily mean anyone will contract cancer as a result of the Project. The Brief also cites the author of the CARB methodology, which reported that a $PM_{2.5}$ methodology is not suited for small projects and may yield unreliable results. Similarly, SCAQMD staff does not currently know of a way to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects reached with respect to NO_X or VOC emissions from relatively small projects, due to photochemistry and regional model limitations. The Brief concludes, with respect to the Friant Ranch Environmental Impact Report (EIR), that although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.

On the other hand, for extremely large regional projects (unlike the proposed Project), the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 lbs./day of NO_X and 89,180 lbs./day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3.

[1] It should also be noted that the actual occurrence of specific health conditions is based on numerous other factors that are infeasible to quantify, such as an individual's genetic predisposition, diet, exercise regiment, stress, and other behavioral characteristics.

The proposed Project does not generate anywhere near 6,620 lbs./day of NO_X or 89,190 lbs/day of VOC emissions. The Project would generate 89.09 lbs./day of NO_X during construction and 94.26 lbs./day of NOx during operations (1.35 percent and 1.40 percent of 6,620 lbs/day, respectively). The Project would also generate 44.12 lbs./day of VOC emissions during construction and 135.75 lbs./day of VOC emissions during operations (0.05 percent and 0.15 percent of 89,190 lbs./day, respectively). Therefore, the Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level.

Notwithstanding, the *AQ Impact Analysis* includes an assessment of the Project's localized impact to air quality for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ by comparing the proposed Project's on-site emissions to the SCAQMD's applicable LST thresholds. As evaluated in the *AQ Impact Analysis*, the Project would not result in emissions that exceeded the SCAQMD's LSTs. Therefore, the Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$.

THRESHOLD 6.c: Would the Project expose sensitive receptors, which are located within one (1) mile of the Project site, to substantial pollutant concentrations?

Less Than Significant Impact

Localized Significance Thresholds (LSTs)

Background

The SCAQMD established LSTs to determine whether a project has the potential to contribute to or cause localized exceedances of the federal (NAAQS) and/or state (CAAQS) ambient air quality standards.

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below federal or 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 will exceed 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.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. 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.

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, 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), which outlines how to analyze localized air quality impacts to sensitive receptors.

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.

Applicability of LSTs for the Project

For this Project, the appropriate Source Receptor Area (SRA) for the LST 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 5 acres in size.

To determine if localized impacts could result from Project construction, the following process is undertaken:

- The CalEEMod model is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to LSTs 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.

Maximum Daily Disturbed-Acreage

Table 4.4-10, ***Maximum Daily Disturbed-Acreage***, is used to determine the maximum daily disturbed-acreage for purposes of modeling localized emissions. As shown, the proposed Project could actively disturb approximately 5.5 acres per day during mass grading activities and 0.5 acre per day during site preparation activities of construction. For the purposes of this analysis, and as a conservative measure, the SCAQMD look-up tables of 5 acres are used to determine LSTs for mass grading activities and 1 acre for site preparation activities. Although the Project site is greater than 1 acre, the LST lookup tables can be used as a conservative measure to show that even if the daily emissions from all project construction were emitted on a 1 acre site (and therefore concentrated over a smaller area which would result in greater site adjacent concentrations), if the impacts are less than significant, then a more detailed evaluation is not necessary.

Table 4.4-10
Maximum Daily Disturbed-Acreage

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Mass Grading					
Mass Grading	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	2	0.5	8	1
	Scrapers	4	1	8	4
Total acres disturbed per day during Mass Grading					5.5
Site Preparation (Phases 1 & 2)					
Site Preparation	Rubber Tired Dozers	1	0.5	8	0.5
Total acres disturbed per day during Site Preparation					0.5

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 potentially house these persons or places where they gather to exercise are defined as "sensitive receptors".

Sensitive receptor locations near the Project site include existing residential homes in the vicinity of the Project. The closest sensitive receptor to the Project site is a residential home located 237' to the west (R2, below). R5 and R6 are closer to the Project site, but R5 and R6 are both currently vacant. Therefore, no people reside on R5 or R6 who would be exposed to emissions from the Project.

- R1: Located approximately 274 feet west of the Project site, R1 represents the existing residential home on Leon Road.
- R2: Located approximately 237 feet west of the Project site, R2 represents existing residential home across Leon Road.
- R3: Located approximately 90 feet north of the Project site, R3 represents an existing agricultural use and vacant land that is designated for residential land use.
- R4: Located approximately 505 feet east of the Project site, R4 represents an existing residential home within agricultural use.
- R5: Located approximately 90 feet east of the Project site, R5 represents vacant land designated for residential land use.
- R6: Located approximately 90 feet south of the Project site, R6 represents vacant land designated for residential use.

Figure 4.4-1, ***Receptor Locations***, depicts the locations of R1-R6 and the Project site.

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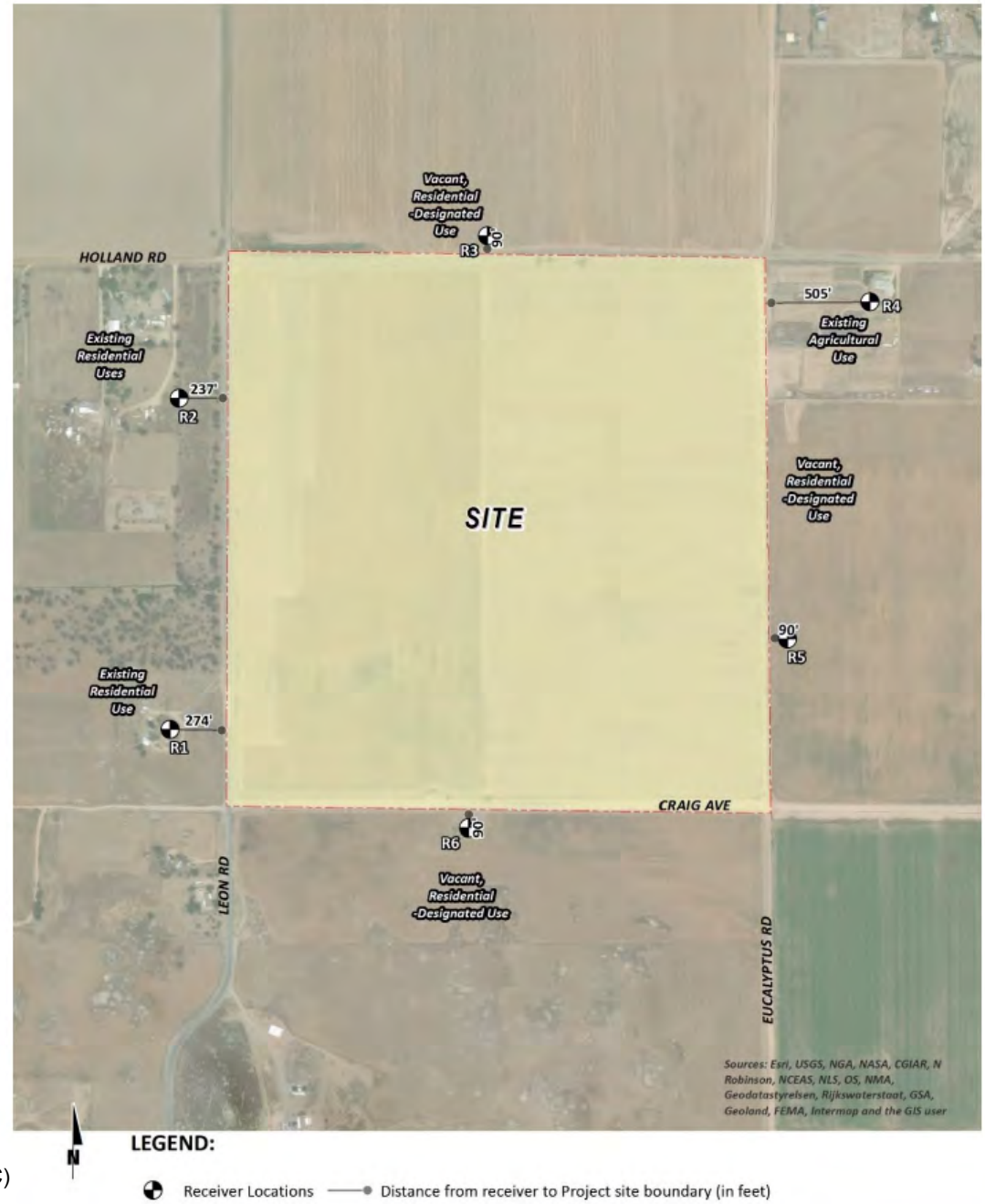
FIGURE 4.4-1
RECEPTOR LOCATIONS



Source: AQ Analysis (**Appendix C**)

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Construction-Source Emissions LST Analysis

Since 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. Since the look-up tables identify thresholds for 1 acre, 2-acre, and 5 acres only, linear regression was used (consistent with SCAQMD guidance) to interpolate threshold values for the other disturbed acreages. As previously noted, a 237-foot/72.24-meter receptor distance is utilized to determine the LSTs for emissions of CO, NO_2, PM_{10}, and $PM_{2.5}$.

As previously stated, for the purposes of this analysis, and as a conservative measure, the SCAQMD look-up tables of 5-acres are used to determine LSTs for mass grading activities and 1-acre per day for site preparation activities. Although the Project site is greater than 1 acre, the LST lookup tables can be used to show that even if the daily emissions from all Project construction were emitted on a 1-acre site (and therefore concentrated over a smaller area which would result in greater site adjacent concentrations), the impacts would be less than significant.

- Impacts (without Mitigation)

Table 4.4-11, ***Localized Significance Summary Construction***, identifies the localized impacts at the nearest sensitive receptor (R2) to the Project. Without mitigation, construction emissions would not exceed the LSTs for any criteria pollutants. Outputs from the model runs for construction LSTs are provided in Appendix 3.1 and 3.2 of the *AQ Impact Analysis*.

Table 4.4-11
Localized Significance Summary Construction

On-Site Mass Grading Emissions	**Emissions (pounds per day)**			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions	**89.01**	**45.81**	**10.25**	**6.18**
SCAQMD Localized Threshold	336	2,738	48	13
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Site Preparation Emissions	**Emissions (pounds per day)**			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Phase 1				
Maximum Daily Emissions	**15.19**	**6.71**	**3.15**	**2.02**
SCAQMD Localized Threshold	176	1,269	20	6
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Site Preparation Emissions	**Emissions (pounds per day)**			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Phase 2				
Maximum Daily Emissions	**12.87**	**6.30**	**2.99**	**1.88**
SCAQMD Localized Threshold	176	1,269	20	6
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Off-Site Localized Construction-Emissions Assessment

As a part of Project construction, an off-site channel, sewer line, and lift station will be constructed adjacent to receptor locations located further from the Residential Project site. As such, this analysis identifies off-site receptor ("OR") locations, OR1 to OR5, adjacent to the Off-site Project components, as shown on **Figure 4.4-2**, ***Off-Site Receptor Locations***, and **Table 4.4-12**, ***Off-Site Receptor Locations***, shows the distance between the off-site Project and the closest receptor locations.

Although the off-site receptors are located at a closer distance, any localized impacts associated with off-site utility improvements would occur in limited daily disturbance areas due to physical constraints and would require less equipment. As such, off-site construction emissions would not result in any localized impacts beyond those previously identified for peak site preparation and grading activities. Impacts will be less than significant.

Table 4.4-12
Off-Site Receptor Locations

Receptor Location	Distance to Construction Activity (Feet)[1]	Distance to Construction Activity (Meters)
OR1	355	108.2
OR2	50	15.2
OR3	205	62.5
OR4	211	64.3
OR5	137	41.8

[1] Distance from the nearest point of construction activity to the nearest receiver.

FIGURE 4.4-2
OFF-SITE RECEPTOR LOCATIONS

Source: AQ Analysis (**Appendix C**)

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Localized Significance – Long-Term Operational Activity

The proposed Project involves the construction and operation of 574 single family residential dwelling units and an 8.2-acre park. According to LST methodology, LSTs would apply to the operational phase, if the Project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the Project 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.

Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed Project may have a significant impact related to hazardous air pollutants (HAP), the Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, (Diesel Analysis), prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create hazardous air pollutants through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the hazardous air pollutants and the toxicity of the hazardous air pollutants should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

As determined in the *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369 (CBIA) case the California Supreme Court determined that CEQA does not generally require an impact analysis of the existing environmental conditions on the future residents of a proposed project and generally only requires an analysis of the proposed project's impact on the environment. However, the CBIA case also stated that when a proposed project brings development and people into an area *already subject to specific hazards* and the new development/people *exacerbate the existing hazards*, then CEQA requires an analysis of the hazards and the proposed project's effect in terms of *increasing the risks related to those hazards [Emphasis added]*. In regard to air quality hazards, TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. As such, if a proposed project would not exacerbate pre-existing hazards (e.g., TAC health risks) then an analysis of those hazards and the proposed project's effect on increasing those hazards is not required.

The Project site is currently vacant land that does not contain any operational land uses that emit toxic air contaminants. There are no health cancer and non-cancer risks associated with TACs. The proposed Project is a residential project and will not be a source of toxic air contaminants. No impacts will occur.

CO Hotspot Analysis

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

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.

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. Also, CO concentrations in the Project vicinity have steadily declined.

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 on **Table 4.4-13, *CO Model Results***.

Table 4.4-13
CO Model Results

Intersection Location	Carbon Monoxide Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire-Veteran	4.6	3.5	4.2
Sunset-Highland	4	4.5	3.9
La Cienega-Century	3.7	3.1	5.8
Long Beach-Imperial	3	3.1	9.3

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. Therefore, even if the traffic volumes for the proposed Project were double or even triple of 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.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection to 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.

Traffic volumes generating the CO concentrations for the "hot spot" analysis, shown on **Table 4.4-14, *Traffic Volumes***. 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. 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). At buildout of the Project, the highest daily traffic volumes generated at the roadways within the vicinity of the Project are expected to generate less than the highest daily traffic volumes generated at the busiest intersection in the CO "hot spot" analysis. As such, the Project would not likely exceed the most stringent 1-hour CO standard.

Table 4.4-14
Traffic Volumes

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Wilshire-Veteran	560/933	721/1,400	4,954/2,069	1,830/3,317	8,062/7,719
Sunset-Highland	1,551/2,238	2,304/1,832	1,417/1,764	1,342/1,540	6,614/5,374
La Cienega-Century	821/1,674	1,384/2,029	2,540/2,243	1,890/2,728	6,634/8,674
Long Beach-Imperial	756/1,150	479/944	1,217/2,020	1,760/1,400	4,212/5,514

The proposed 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. Review of the traffic volumes as shown on **Figure 4.15-35, EAP (*Phase 2 Project Buildout 2025) Average Daily Traffic (ADT)*** (Located in Subchapter 4.15 of this DEIR), indicates that the maximum average daily trip (ADT) volumes for existing plus ambient growth plus the Project for the year 2025, is 30,900 vehicles per day along Antelope Road and Scott Road. Furthermore, the maximum hourly volume at the study area intersections 3,316 AM peak hour volumes and 3,970 PM peak hour volumes which do not exceed the 24,000 vehicles per hour. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

THRESHOLD 6.d: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant with Mitigation Incorporated

The potential for an odor impact (from other emissions) is dependent on a number of variables including the nature of the odor source, distance between the receptor and odor source, and local meteorological conditions. During construction, potential odor sources associated with the Project will include diesel exhaust associated with construction equipment. Diesel exhaust may be noticeable; however, construction activities would be temporary. Therefore, the diesel exhaust odors are not anticipated to result in significant impacts.

Potential odor sources associated with the operation of the Project are anticipated to be those that would be typical of any residential development. Residential developments typically do not result in odor impacts; therefore, this impact would be less than significant.

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills.

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous residential refuse. Consistent with County requirements, all Project generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations, thereby precluding substantial generation of odors due to temporary holding of refuse on-site.

The following mitigation is proposed to reduce potential land use conflicts from the existing (and future) odors from the established agricultural uses.

The Project is subject to Assembly Bill 2881 – Right-to-Farm Disclosure, as discussed above. Mitigation can be achieved by providing disclosure to future residents that the Project site is located within 1 mile of farmland as designated on the most recent Important Farmland Map. In addition, the Project is subject to Riverside County Ordinance No. 625 (Right-to-Farm Ordinance). This Ordinance requires prospective buyers of property adjacent to agricultural land to be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities.

Standard Condition SC-AG-1, as outlined in Section 4.4.5, requires disclosures as part of all home sales transaction(s).

Mitigation can also be achieved by establishing a line of communication between the local farmers and future residents of the Project, once the homeowners have acknowledged the disclosures in **SC-AG-1**, above, and have occupied their homes.

4.4.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The following will be implemented by the Project when future residents purchase property within the Project. This is a standard condition and is not unique this Project (or projects in a similar setting.

SC-AQ-1 **The following measures shall be incorporated into Project plans and specifications as implementation of Rule 1113: Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High-Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.**

SC-AQ-2 **All applicable measures shall be incorporated into Project plans and specifications as implementation of Rule 403, which include but are not limited to:**

- **All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 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 mid-morning, 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 miles per hour or less.**

SC-AG-1 **The Project applicant shall comply with Assembly Bill 2881 Riverside County Ordinance No. 625. Disclosure shall be provided prior to the close of escrow on the sale of individual homes. This shall be obtained by including the following disclosures on the title report:**

1. **The property is located within 1 mile of farmland as designated on the most recent Important Farmland Map; and**
2. **Residents could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the County's Right-to-Farm Ordinance.**

Mitigation Measure(s)

The following is a construction-related mitigation measure as it pertains reducing VOC emissions:

MM-AQ-1 **During construction, the Project shall utilize "Super-Compliant" low VOC paints for the building envelope application which have been reformulated to exceed the regulatory VOC limits put forth by SCAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10g/L of VOC. Alternatively, the Project may utilize building materials that do not require the use of architectural coatings.**

Operations-related mitigation measures, which also apply to Greenhouse Gas Emissions, are as follows:

MM-GHG-1 **Prior to issuance of each building permit, the Project Applicant shall provide documentation to the County of Riverside Building Department demonstrating that the improvements and/or buildings subject to each building permit application include the following measures from the County of Riverside Climate Action Plan (November 2019) Greenhouse Gas Emissions Screening Tables (Appendix F to the Climate Action Plan), as needed to achieve the required 100 points. Alternatively, the specific measures may be substituted for other measures, so long as 100 points are still achieved on the checklist, subject to County of Riverside Building Department review:**

1. **Measure EE5.A.1 Insulation - Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) (9 points)**
2. **Measure EE5.A.2 Windows - Enhanced Window (0.32 U-factor, 0.25 SHGC) (4 points)**
3. **Measure EE5.A.3 Cool Roofs - Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) (7 points)**
4. **Measure EE5.A.4 Air Infiltration - Blower Door HERS Verified Envelope Leakage or equivalent (5 points)**
5. **Measure EE5.B.1 Heating/Cooling Distribution System - Modest Duct Insulation (R-6) (4 points)**
6. **Measure EE5.B.2 Space Heating/Cooling Equipment - Very High Efficiency HVAC (SEER 16/82% AFUE or 9 HSPF) (5 points)**
7. **Measure EE5.B.3 Water Heaters - Very High Efficiency Water Heater (0.92 Energy Factor) (11 points)**
8. **Measure EE5.B.5 Artificial Lighting - High Efficiency Lights (50% of in-unit fixtures are high efficiency) (6 points)**
9. **Measure EE5.B.6 Appliances - Energy Star Refrigerator (new) Energy Star Dishwasher (new) Energy Star Washing Machine (new) (3 points)**
10. **Measure CE1.A.1 Photovoltaic - 50 percent of the power needs of the Project (17 points)**
11. **Measure W2.A.2 Water Efficient Landscaping - Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use) (2 points)**
12. **Measure W2.B.1 Showers - Water Efficient Showerheads (2.0 gpm) (2**

points)

13. **Measure W2.B.2 Toilets - Water Efficient Toilets (1.5 gpm) (2 points)**
14. **Measure W2.B.3 Faucets - Water Efficient faucets (1.28 gpm) (2 points)**
15. **Measure W2.B.4 Dishwasher - Water Efficient Dishwasher (6 gallons per cycle or less) (1 points)**
16. **Measure W2.B.5 Washing Machine - Water Efficient Washing Machine (Water factor <5.5) (1 points)**
17. **Measure W2.B.6 WaterSense - EPA WaterSense Certification (7 points)**
18. **Measure T4.A.1 Electric Vehicle Recharging - Install electric vehicle charging stations for each residential unit included in the Project. Projects that include charging stations for fewer than all units shall receive points on a proportional basis. (8 points)**
19. **Measure S1.A.1 Recycling - Provide green waste composting bins at each residential unit (4 points)**

4.4.6 Cumulative Impacts

The Project area is designated as an extreme non-attainment area for ozone and a non-attainment area for PM_{10} and $PM_{2.5}$.

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-AQ-2**, as well as **Mitigation Measure MM-AQ-1**, the proposed Project would not result in exceedances of regional air quality thresholds during construction. Therefore, the proposed Project construction-source air emissions would be considered a less than significant impact.

Mitigation Measure MM-GHG-1 shall be implemented to reduce operational source (VOC) emissions. 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. No feasible mitigation measures exist that would reduce this impact to less than significant levels.

Additionally, over 84 percent 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 beyond what is contained in **Mitigation Measure MM-GHG-1** that would reduce NO_x emissions to levels that are less than significant. Therefore, these emissions are considered significant and unavoidable.

Conflicts due to odors between the Project and the adjacent agricultural uses can be addressed through mitigation. Mitigation can be achieved by establishing a line of communication between the local farmers and future residents of the Project (see **Standard Condition SC-AG-1**). These impacts are not considered cumulative in nature.

4.4.7 Unavoidable Significant Adverse Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-AQ-2**, as well as **Mitigation Measure MM-AQ-1** and **Mitigation Measure MM-GHG-1**, construction of the

proposed Project would not result in emissions that exceed applicable SCAQMD regional air quality thresholds. Even with the incorporation of **Mitigation Measure MM-GHG-1**, project operational-source emissions would exceed applicable SCAQMD regional thresholds of significance for emissions (VOC and NO_x) during operation even after implementation of the recommended mitigation measures. All other criteria pollutants are below thresholds. Impacts will remain significant and unavoidable during operations.

4.5 BIOLOGICAL RESOURCES

4.5.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of biological resources from implementation of the proposed Project. The Biological Resources Section of the of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

7. Wildlife & Vegetation.

a. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?
b. Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?
c. 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. Wildlife Service?
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?
e. 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?
f. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
g. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Based on the analysis in the IS it was determined that the question pertaining to issue area 7.g., related to the biological resources (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to this question, the IS identified "no impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining six (6) issue areas related to biological resources in the questions asked above **would** be further analyzed in the DEIR.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The text contained in issue area 7.f. was revised; this text revision will be reflected in the DEIR.

There are no standard conditions or mitigation measures presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *General Plan* (*Multipurpose Open Space Element – Chapter 5*) https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- *Canterwood Project (Tentative Tract Map No. 37439) General Biological Resources Assessment, prepared by Helix Environmental Planning, Inc., September 4, 2018 (GBRA*, **Appendix D***)*
- *Western Riverside County Multiple Species Habitat Conservation Plan* http://rctlma.org/Portals/0/mshcp/volume1/sec6.html

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter #4: Department of Fish and Wildlife (dated 11/2/18) was received regarding biological resources in response to the Notice of Preparation. Department of Fish and Wildlife is a state agency under the California Natural Resources Agency that manages and protects the state's fish, wildlife, plant and native habitats. The following comments pertaining to biological were contained in *Comment Letter #4*:

- Findings of Fact (a), on page 76 of the Initial Study (IS) incorrectly states "There is no Natural Conservation Community Plan [NCCP]…applicable to the Project site." The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is an approved NCCP, as well as an approved Habitat Conservation Plan (HCP): CDFW issued NCCP Approval and Take Authorization for the Western Riverside County MSHCP per section 2800 et seq., of the California Fish and Game Code on June 22, 2004 (see attached NCCP Permit 2835-2003-001-06). CDFW recommends that the DEIR accurately identify that the Western Riverside County MSHCP is an adopted NCCP (as well as an adopted HCP).
- The IS does not explicitly state the biological surveys that will be completed on the Project site, nor does it identify those surveys that are required to satisfy the policies and procedures of the MSHCP. MSHCP policies and procedures that apply to the proposed Project include: Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP section 6.1.2), Protection of Narrow Endemic Plant Species (MSHCP section 6.1.3), and Additional Survey Needs and Procedures for burrowing owl. Please note that the DEIR needs to address how the proposed project will affect the policies and procedures of the MSHCP. Therefore, all surveys required by the MSHCP policies and procedures listed above to determine consistency with the MSHCP should be conducted and results included in the DEIR so that CDFW can adequately assess whether the Project will impact the MSHCP.
- CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Canterwood Project (SCH No. 2018101011) and recommends that the County of Riverside address CDFW's comments in the forthcoming DEIR. If you should have any questions pertaining to these comments please feel free to contact me.

Response: The Findings of Fact (a), on page 76 of the Initial Study (IS) incorrectly states "There is no Natural Conservation Community Plan [NCCP]…applicable to the Project site" is a typographical error. The applicable NCCP is the MHSCP. This is correctly referenced in the remainder of this section of the IS.

The IS did explicitly state the biological surveys that will be completed on the Project site, and it did identify those surveys that are required to satisfy the policies and procedures of the MSHCP (pp. 75-78). Biological surveys were conducted by HELIX Environmental Planning, Inc. (HELIX) on the Project area to satisfy the policies and procedures of the MSHCP. The survey results are documented in General Biological Resources Assessment prepared by HELIX dated September 4, 2018. A summary of surveys conducted to ensure Project consistency with the MSHCP is provided below:

1. *MSHCP Section 6.1.2 – Riparian/Riverine Areas and Vernal Pools. A Riparian/Riverine and Vernal Pool habitat assessment was conducted on June 28, 2017.*
2. *MSHCP Section 6.1.3 – Narrow Endemic Plant Species. The Project area is located within Narrow Endemic Plant Species Survey Area (NEPSSA) 4. Focused NEPSSA surveys were conducted on August 22, 2017, and May 14, June 29, and July 24, 2018.*
3. *MSHCP Section 6.1.4 – Urban Wildlife Interface Guidelines. Although the Project is not within or adjacent to land targeted for conservation, the Project would comply with applicable Urban Wildlife Interface Guidelines (drainage, toxics, lighting, and invasives).*
4. *MSHCP Section 6.3.2 – Additional Surveys.*
   a. *Criteria Area Species – The Project area is not located within a Criteria Area Species Survey Area; therefore, focused surveys were not required.*
   b. *Amphibian Species – The Project area is not located within an Amphibian Species Survey Area; therefore, focused surveys were not required.*
   c. *Bird Species – The Project area is located within a MSHCP Burrowing Owl Survey Area. A habitat assessment was conducted on June 28, 2017 and focused surveys were conducted between June and August 2017 and between July and August 2018.*
   d. *Mammal Species – The Project area is not located within a Mammal Species Survey Area; therefore, focused surveys were not required.*
5. *MSHCP Section 6.4 – Fuels Management. The Project area is not adjacent to an MSHCP Conservation Area. Therefore, fuel modification impacts would not extend into a Conservation Area.*

Please refer to the analysis below.

No comments regarding biological resources were received at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 7a. through 7.f and the issues identified in the NOP/IS are the focus of the following evaluation of biological resources.

All the Tables and Figures in this Subchapter are from the *General Biological Assessment*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical study, which is provided in Volume 2 of the DEIR, the Technical Appendices.

4.5.2 Environmental Setting

Surrounding Uses

Agriculture dominates the Project area and the surrounding area. The Project site currently supports dryland farming, which has occurred on the Project site since at least the 1930s. Although the proposed off-site drainage facility primarily supports agriculture, there is a small patch of eucalyptus woodland in the eastern portion. Disturbed land on the study area comprises existing dirt roads along Craig Avenue, Eucalyptus Avenue, Holland Road, and Briggs Road as well as the area to the north of the Wilderness Lakes RV Resort. Two developed areas were observed on the Project area, which includes the paved portions of Leon Road and Briggs Road. Land uses adjacent to the Project site include agriculture to the north, east, and south and rural residential to the east and west. The off-site areas are primarily surrounded by agriculture. A residential development is located to the north and west of the sewer line alignment proposed along Tres Lagos Drive and the Wilderness Lakes RV Resort is located to the south. The Wilderness Lakes RV Resort is also located to the west of the sewer alignment proposed along Briggs Road.

Topography and Soils

Site topography of the Residential Project area is flat. Elevations on the Residential Project Site range from approximately 1,428 feet above mean sea level (AMSL) within the off-site sewer line near the northern boundary of Wilderness Lakes RV Resort to approximately 1,448 feet AMSL along the northern boundary of the Project site.

The Multiple Species Habitat Conservation Plan (MSHCP) lists eight sensitive soil types as occurring within the MSHCP Plan Area, which include Altamont clay, Auld clay, Bosanko clay, Claypit, Domino clay, Porterville cobbly clay, Traver, and Willows. The Project area does not support any of these eight sensitive soils types. The Project site is mapped primarily as Exeter sandy loam (0 to 2 percent slopes; and 2 to 8 percent slopes), which is a well-drained soil typically associated with alluvial fans. The remainder of the Project site supports patches of Domino fine sandy loam (eroded), Domino silt loam (saline-alkali), Greenfield sandy loam (0 to 2 percent slopes), Pachappa fine sandy loam (0-2 percent slopes), Pachappa fine sandy loam (2-8 percent slopes, eroded), and Vista rocky coarse sandy loam (2 to 35 percent slopes, eroded). Domino soil type is a moderately well-drained soil while Greenfield, Pachappa, and Vista soil types are well-drained soils. Domino and Pachappa soils are associated with alluvial fan landforms, Greenfield soil is associated with alluvial fan and terrace landforms, and Vista soil is associated with hills and uplands.

The Off-Site Project Component areas support similar soil types as listed above for the Project site, including Exeter sandy loam (0 to 2 percent slopes; deep, 0 to 2 percent slopes; and slightly saline-alkali, 0 to 5 percent slopes), Exeter very fine sandy loam (0 to 5 percent slopes), Domino silt loam, Domino silt loam (saline-alkali), Domino fine sandy loam (eroded; and saline-alkali), Greenfield sandy loam (0 to 2 percent slopes), and Pachappa fine sandy loam (0 to 2 percent slopes).

Although the majority of the soils mapped on the Project area are typically associated with alluvial fan habitats, the Project area does not support natural habitats and has been used for agricultural purposes since at least the 1930s.

Vegetation Communities

A total of four vegetation communities or land uses were mapped on the Project area, including agriculture, eucalyptus woodland, disturbed, and developed (see **Table 4.5-1, *Vegetation Communities***, and **Figure 4.5-1, *Vegetation***). The Project area is dominated by active agricultural land and supports no native vegetation communities. A brief description of each vegetation community and land uses mapped on the Project area is provided below.

Table 4.5-1
Vegetation Communities

Vegetation Community	Residential Project Site (acres)	Off-Site Project Components (acres)	Total (acres)
Agriculture	149.72	31.80	181.52
Eucalyptus Woodland	0.00	1.85	1.85
Disturbed	16.25	16.04	32.29
Developed	5.35	2.54	7.89
TOTAL	171.32	52.23	233.55

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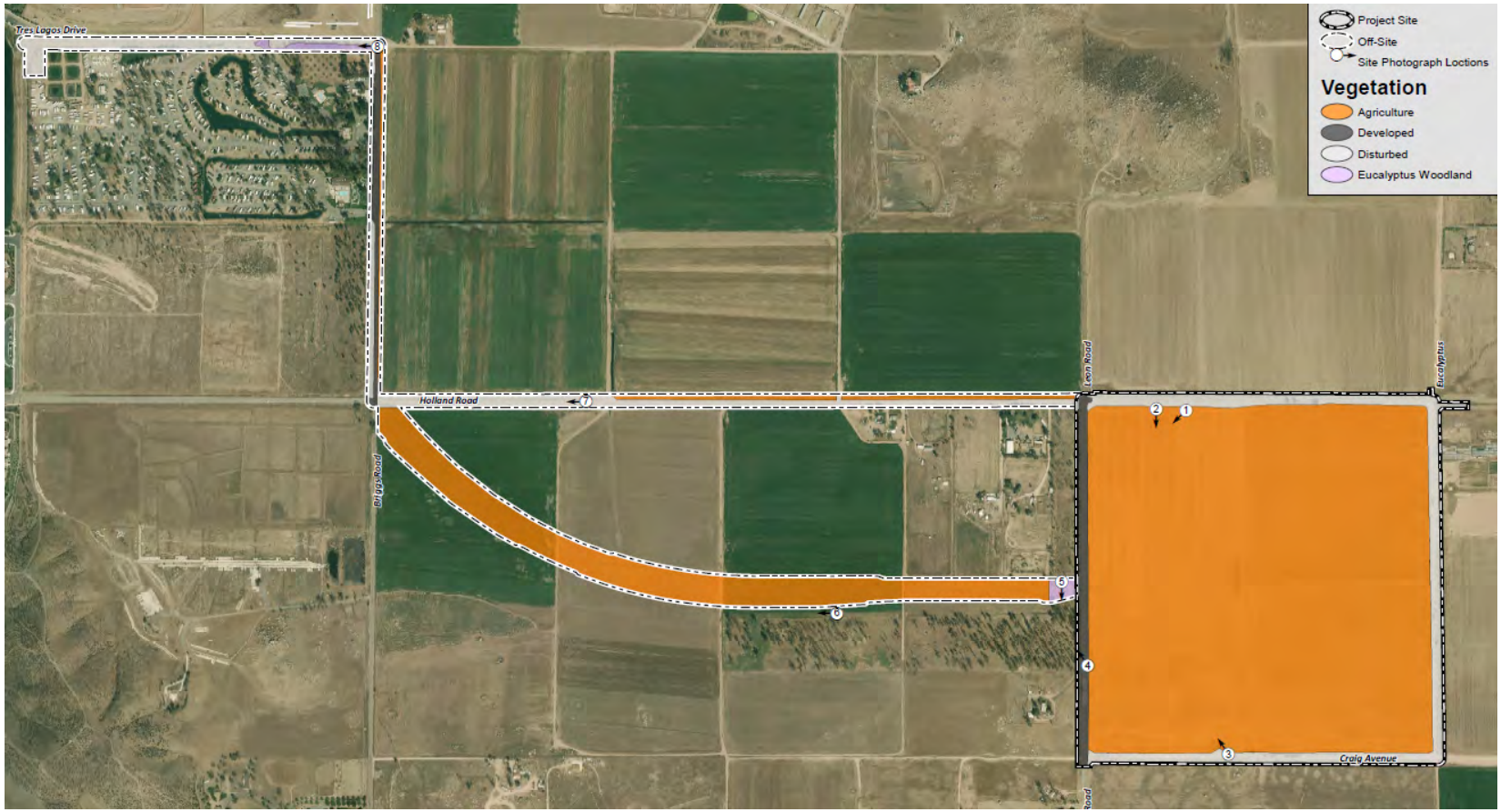
FIGURE 4.5-1
VEGETATION



Source: GBRA Report (**Appendix D**)

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- Agriculture

Agriculture is defined broadly as land used primarily for production of food and fiber. On satellite imagery, the chief indications of agricultural activity are distinctive geometric field and road patterns on the landscape and the traces produced by livestock or mechanized equipment. However, pasture and other lands where such equipment is used infrequently may not show as well-defined shapes as other areas. The number of building complexes is smaller, and the density of the road and highway network is much lower in agriculture than in urban/developed land.

Agriculture dominates the study area, which totaled 181.52. Agriculture was observed within the project site, the off-site drainage facility, and the off-site sewer line adjacent to the roads. The main crops observed were barley and watermelon. After crops were harvested, some non-native weedy species were observed within the fields, including Bermuda grass, slender oat, and white tumbleweed.

- Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus, an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum or red gum. The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and can reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however, these woodlands provide excellent nesting sites for a variety of raptors. During winter migrations, a large variety of warblers may be found feeding on the insects that are attracted to the eucalyptus flowers.

Eucalyptus woodland was observed within the eastern portion of the off-site drainage channel. Very few plants were observed within the understory, but included non-native, weedy species such as cheeseweed, London rocket, rancher's fiddleneck, and red brome.

- Disturbed

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a number of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Disturbed areas comprise existing dirt roads along Craig Avenue, Eucalyptus Avenue, Holland Road, and Briggs Road. These areas are mostly unvegetated, although a few species with high tolerance for disturbance were observed, such as cheeseweed, horseweed, nettle-leaf goosefoot, prickly Russian thistle, short-pod mustard, and wild lettuce.

- Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Two small developed areas were observed within the study area, which included paved portions of

Leon Road and Briggs Road. There was no vegetation observed within the developed areas.

Plants

A total of 74 plant species within the Project area during surveys to date, of which 48 species (65 percent) are non-native species (see Appendix A of the *GBRA*). The predominance of non-native species is indicative of the high degree of disturbance as a result of historical and current agricultural use of the site.

Animals

A total of 32 animal species were identified on the study area during biological surveys, including 30 bird species and 2 mammal species (see Appendix B of the *GBRA*).

Sensitive Biological Resources

- Rare Plant Species

Rare plant species are uncommon or limited in that they: (1) are only found in the western Riverside County region; (2) are a local representative of a species or association of species not otherwise found in the region; or (3) are severely depleted within their ranges or within the region. Rare plant species include those species listed by California Native Plant Society (CNPS) with a California Rare Plant Rank (CRPR) of 1 or 2, federally and state listed endangered and threatened species, or those species that require additional surveys by the MSHCP.

A total of 55 rare plant species were recorded within the 12-quadrangle database search conducted on California Natural Diversity Database (CNDDB) and CNPS. These species are included in Appendix E, Rare Plant Species Potential to Occur of the *GBRA*. Of the 55 rare plant species recorded within the vicinity of the Project area, 50 species are considered to have no potential to occur on the Project area based on geographic range, elevation range, and/or lack of suitable habitat on the Project area. The remaining five species are to have a potential to occur on the Project area primarily based on the presence of mapped saline-alkaline soils and/or some ponding associated with the agricultural ditch.

These species include:

- San Diego ambrosia (Ambrosia pumila);
- spreading navarretia (Navarretia fossalis);
- Parish's brittlescale (Atriplex parishii);
- smooth tarplant (Centromadia pungens ssp. laevis); and
- San Bernardino aster (Symphyotrichum defoliatum).

Rare plant surveys were conducted on the Project area (with the exception of the northern portion of the off-site sewer alignment) on August 22, 2017 and May 14, 2018 to determine the presence or absence of rare plant species on the study area. The most northern portion of the off-site sewer alignment located to the north of the Wilderness Lakes RV Resort was surveyed on June 28, 2018 and July 24, 2018. Smooth tarplant, which is an annual herb, was observed in the northern portion of the Project site within an agricultural ditch. A total of two individuals

were observed during the August 2017 survey and one individual was observed during the May 2018 survey (see **Figure 4.5-2, *Smooth Tarplant Locations***). No rare plants were observed within the northern portion of the off-site sewer alignment during the June or July 2018 surveys. No other rare plants were observed on the Project area.

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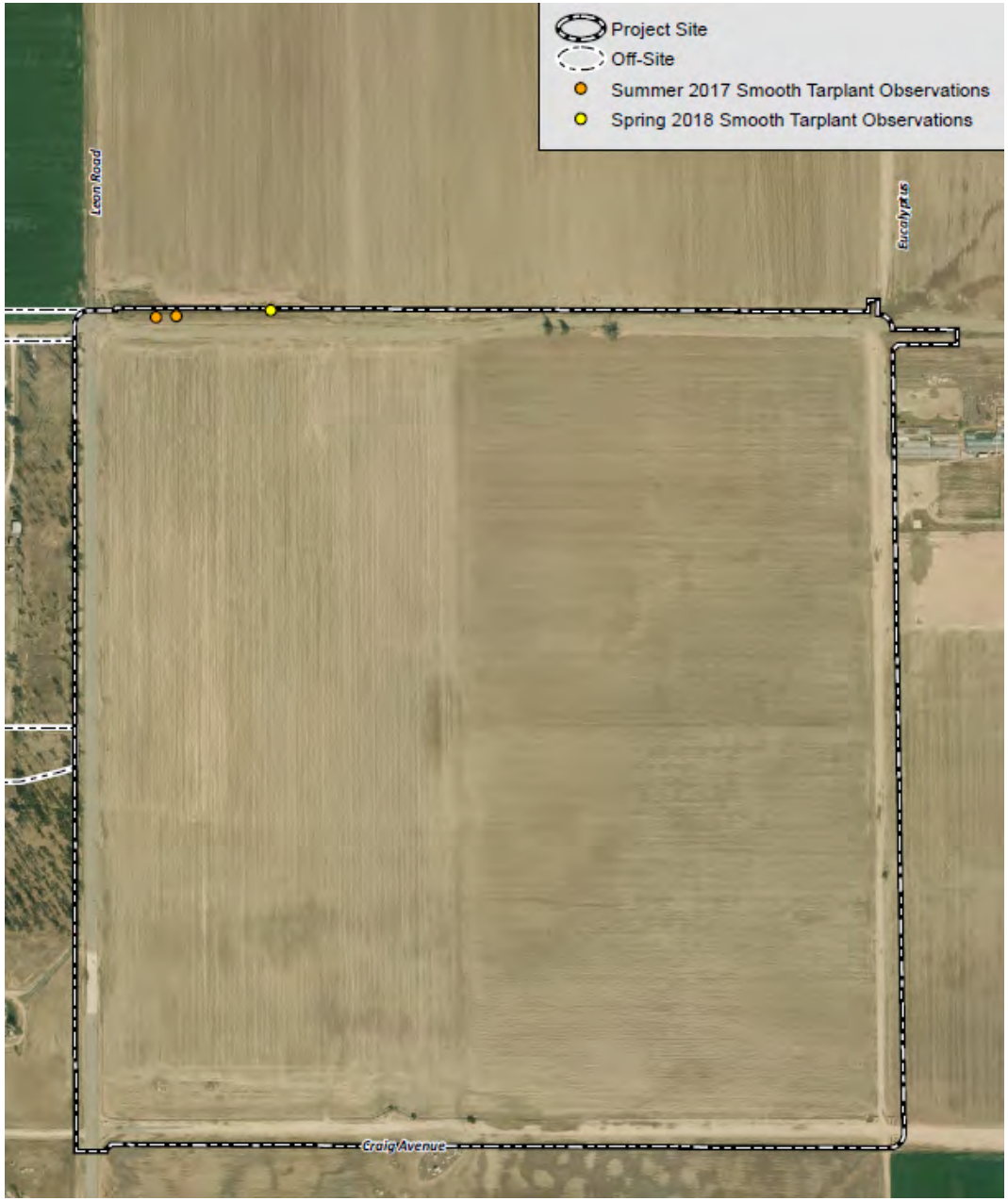
FIGURE 4.5-2
SMOOTH TARPLANT LOCATIONS



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- Sensitive Animal Species

Sensitive animal species include federally, and state listed endangered and threatened, candidate species for listing by United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW), and/or are species of special concern (SSC) pursuant to CDFW. A total of 48 sensitive animal species were recorded within the 12-quadrangle database search conducted on CNDDB. These species are included in Appendix F, Sensitive Animal Species Potential to Occur of the *GBRA*. Of the 48 sensitive animal species recorded within the vicinity of the Project area, 35 species are considered to have no potential to occur on the Project area due to lack of suitable habitat and four species (golden eagle [Aquila chrysaetos], Swainson's hawk [Buteo swainsoni], northern harrier [Circus cyaneus], and Townsend's big-eared bat [Corynorhinus townsendii]) are not expected to occur due to lack of suitable habitat for residence and/or breeding, but may disperse through or across the Project area.

Of the remaining nine species, four species were determined to have a low potential to occur on the Project area based on the presence of low quality habitat, limited acreage of habitat, and lack of recent observations within the immediate vicinity of the Project area. These species include western spadefoot toad (Spea hammondii), coastal whiptail (Aspidoscelis tigris stejnegeri), white-tailed kite (Elanus leucurus), and western mastiff bat (Eumops perotis californicus). Two species were determined to have a moderate potential to occur on the Project area based on the presence of some habitat (although disturbed) and/or small extent of habitat. These species include loggerhead shrike (Lanius ludovicianus) and San Diego black-tailed jackrabbit (Lepus californicus bennettii). Three species (vernal pool fairy shrimp [Branchinecta lynchi], Riverside fairy shrimp [Streptocephalus woottoni], and burrowing owl) are presumed absent from the Project area based on negative surveys. An evaluation of each sensitive animal species' potential to occur on the Project area is provided in Appendix F of the *GBRA*.

Dry season fairy shrimp surveys were conducted for the San Pedro Farms Project (TTM No. 36467). The surveys were conducted within the agricultural ditch located near the northern Project boundary, as required by the County. The surveys were conducted in September 2015. The dry season surveys were conducted following USFWS's Survey Guidelines for Listed Large Branchiopods. No listed fairy shrimp eggs were collected from the agricultural ditch during the survey.

A relict ditch associated with prior dairy activities was observed within the off-site sewer alignment to the north of the Wilderness Lakes RV Resort and is believed to have been used for containment of runoff and waste generated directly by historic dairy farm activities. No suitable fairy shrimp habitat was noted.

Focused surveys for burrowing owl were conducted in accordance with the County's survey protocol. No burrowing owls or burrowing owl signs were observed on the Project site, off-site sewer alignment (excluding the northern portion), or off-site drainage facility during the 2017 surveys, or within the northern portion of the off-site sewer alignment during the 2018 surveys. Therefore, these areas do not currently support burrowing owls.

- Sensitive Vegetation Communities/Habitats

Sensitive vegetation communities/habitats are considered either rare within the region or sensitive by CDFW. Communities are given a Global (G) and State (S) ranking on a scale of 1 to 5. Communities afforded a rank of 5 are most common while communities with a rank of 1 are considered highly periled. CDFW considers sensitive communities as those with a rank between S1 and S3. No sensitive vegetation communities/habitats pursuant to CDFW were mapped on the study area.

- Habitat and Wildlife Corridor

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species presence. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations.

The Project area does not directly connect to large blocks of habitat. The Project area is entirely surrounded by existing agriculture and residential communities and does not support any native vegetation communities. Therefore, the Project area does not function as a wildlife corridor. Local wildlife corridors likely occur within the hills to the north of the study area, which support native vegetation that may provide habitat for resident wildlife. Regional wildlife corridors likely occur within larger habitat blocks within the hills further southeast and south of the Project area (e.g., Bachelor Mountain and Black Mountain).

The Project area is not located within any MSHCP Linkages, which are portions of the Plan Area that were identified as having the potential to facilitate wildlife movement. The nearest linkages to the Project area are Constrained Linkage B, which is approximately 1.7 miles to the north of the Project area and comprises Salt Creek, and Proposed Constrained Linkage 17, which is approximately 1.7 miles to the south of the Project area and comprises Paloma Valley. The Project area is not located within any linkages recognized by the South Coast Missing Linkages report. The nearest linkage described by the South Coast Missing Linkages report is the San Bernardino – San Jacinto Connection, approximately 16.5 miles to the north of the study area (South Coast Wildlands 2008).

Although the Project area does not function as a wildlife corridor, it does support eucalyptus trees and some herbaceous ground cover that may provide limited opportunities for local wildlife movement of small mammals and birds. Smaller mammals that are adapted to human disturbance (e.g., California ground squirrel [Otospermophilus beecheyi] and cottontail rabbits [Sylvilagus sp.]) may use the Project area for foraging and/or cover and bird species may use the Project area for foraging and/or nesting.

Therefore, the Project area may support limited opportunities for local wildlife movement of small mammals and birds but does not function as wildlife corridor since it does not connect large blocks of habitat.

- Jurisdictional Waters

Based on the results of the jurisdictional assessment, two jurisdictional ditches (agricultural ditch and roadside ditch) were observed within the Project area. The agricultural ditch is a manmade, isolated agricultural drainage feature located near the northern Project boundary. As described in detail below, the agricultural ditch supports 0.14 acre of non-wetland CDFW jurisdiction, which is based on the biological findings presented in the CEQA document for the proposed San Pedro Farms Project (reference **Figure 4.5-3, *Jurisdictional Features***, and **Table 4.5-2, *Jurisdictional Features***). Since jurisdictional field indicators (e.g., ordinary high water mark (OHWM), defined bed and bank) were absent and the ditch is an isolated manmade feature used solely for agricultural purposes that is filled seasonally from an adjacent waterline, the agricultural ditch is presumed to not support USACE/RWQCB jurisdiction. The roadside ditch is located within the off-site sewer alignment on the west side of Briggs Road, commencing within the Project area near the southeast corner of the Wilderness Lakes RV Resort. Jurisdictional field indicators were observed within the roadside ditch and the ditch connects to Menifee Lakes to the west. Therefore, the roadside ditch supports 0.01 acre of non-wetland USACE/RWQCB jurisdiction and 0.03 acre of non-wetland CDFW jurisdiction.

Table 4.5-2
Jurisdictional Features

Drainage	USACE/RWQCB (acres)	CDFW (acres)
Agricultural Ditch	-	0.14
Roadside Ditch	0.01	0.03
TOTAL	**0.01**	**0.17**

[1] Jurisdictional acreages overlap and are not additive (e.g., USACE/RWQCB acreages are included in the CDFW acreages).
[2] Acreage is rounded to the nearest hundredths.

In addition to the two jurisdictional features described above, the Project area supports a system of earthen irrigation ditches that convey water to the agricultural fields located on and adjacent to the Project area. The irrigation ditches were determined to be non-jurisdictional due to lack of jurisdictional field indicators. A relict ditch associated with prior dairy activities was observed within the offsite sewer alignment to the north of the Wilderness Lakes RV Resort and is believed to have been used for containment of runoff and waste generated directly by historic dairy farm activities. This portion of the alignment occurs within the Rockport Ranch Project. The relict ditch was determined non-jurisdictional. Jurisdictional and non-jurisdictional features are described in detail below.

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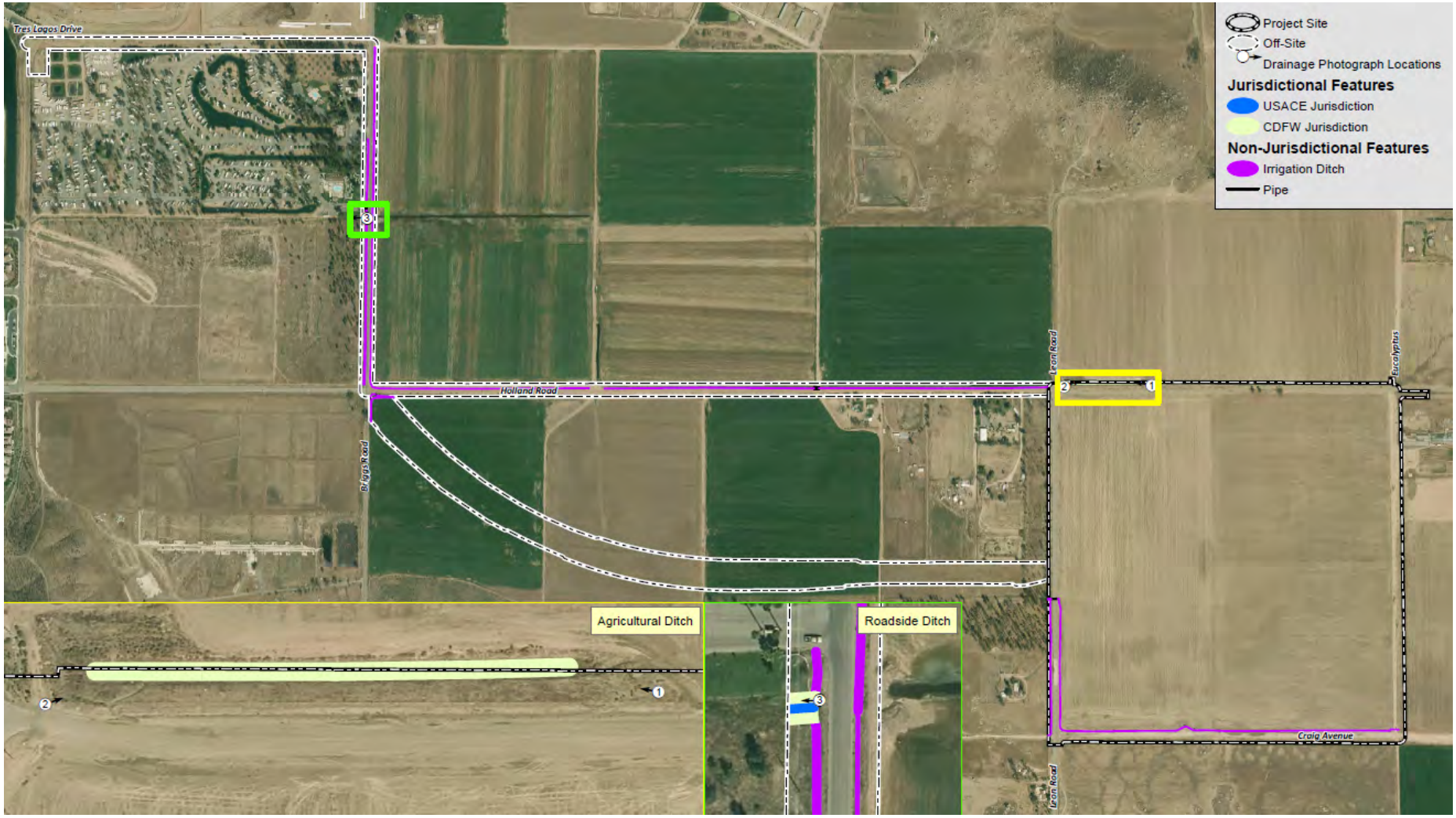
FIGURE 4.5-3
JURISDICTIONAL FEATURES



Source: GBRA Report (**Appendix D**)

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Agricultural Ditch

The agricultural ditch is located near the northern project boundary (reference **Figure 4.5-3**). The ditch was created as part of the San Pedro Farms operation to the north of the Project area and accepts irrigation runoff. The agricultural field and associated ditch were operational as early as 1967. The agricultural ditch is completely isolated and does not convey water to, or accept flows from, any natural or artificial drainage systems. The soil within the ditch is mapped as Greenfield sandy loam (0 to 2 percent slopes). No water was observed within the ditch during the general biological survey/jurisdictional assessment. However, the agricultural ditch is visible on Google Earth aerials full of agricultural water as recent as February 2018. Native and non-native species observed within the agricultural ditch include alkali-mallow (Malvella leprosa), annual beardgrass (Polypogon monspeliensis), curly dock (Rumex crispus), Mediterranean canary grass (Phalaris minor), Mexican sprangle-top (Leptochloa fusca ssp. uninervia), nettle-leaf goosefoot, prostrate knotweed (Polygonum aviculare), saltgrass (Distichlis spicata), and yellow nutsedge (Cyperus eragrostis).

Environmental Science Associates (ESA) conducted a jurisdictional delineation for the San Pedro Farms project located near the northern Project boundary, which included the agricultural ditch in 2015. ESA dug a wetland pit within the low-flow channel of the agricultural ditch to determine whether wetlands were present within the ditch. ESA determined that hydrology indicators and hydric soil indicators were absent. Therefore, ESA concluded that wetlands are not present within the agricultural ditch. The agricultural ditch was presumed to not support USACE/RWQCB jurisdiction since flow indicators (e.g., OHWM, defined bed and bank) were absent and the ditch is an isolated artificial feature. However, the agricultural ditch is considered CDFW jurisdictional, totaling approximately 0.14 acre (reference **Table 4.5-2**).

Roadside Ditch

The roadside ditch is located within the off-site sewer alignment on the west side of Briggs Road, near the southeast corner of the Wilderness Lakes RV Resort. The roadside ditch collects road runoff and conveys water to a drainage directly south of the Wilderness Lakes RV Resort, located outside of the Project area. Historically, the roadside ditch drained to an isolated basin located on the property south of the Wilderness Lakes RV Resort. However, the basin was hydraulically removed from the system and connected to Menifee Lakes to the west. Flow indicators were observed within the roadside ditch and the ditch connects to Menifee Lakes. Water from Menifee Lakes drains into Salt Creek, which flows west and feeds into Canyon Lake approximately 5.3 miles to the west of the Project area. Water flows from Canyon Lake into Lake Elsinore via San Jacinto River, ultimately draining into the Santa Ana River at the Prado Flood Control Basin in San Bernardino County. The Santa Ana River discharges into the Pacific Ocean south of Huntington Beach in Orange County approximately 50 miles to the southwest of the Project area. The roadside ditch is mostly unvegetated, with some weedy non-native species observed including prickly Russian thistle, red brome, and short-pod mustard. Within the Project area, the roadside ditch supports 0.01 acre of USACE/RWQCB jurisdiction and approximately 0.03 acre of CDFW jurisdiction.

Irrigation Ditches (Non-Jurisdictional)

A number of irrigation ditches were observed throughout the study area (reference **Figure 4.5-3**). The earthen ditches convey water to the agricultural fields located within and adjacent to the

Project area. Water flow within the irrigation ditches is controlled by the farming operations and water has been observed being pumped into the ditches during field assessments for the *GBRA*. Little to no vegetation was observed within the ditches, which appeared to be periodically cleared to maintain water flow through the ditches.

When vegetation was present, species observed included alkali weed (Cressa truxillensis), English plantain (Plantago lanceolata), prickly Russian thistle, red brome, and salt heliotrope (Heliotropium curassavicum var. oculatum). The irrigation ditches are not considered to be USACE/RWQCB or CDFW jurisdictional since no jurisdictional field indicators associated with streambeds (e.g., OHWM or a defined bed and bank). The ditches are maintained on a regular basis, are wholly excavated in uplands, do not drain to jurisdictional waters downstream, and convey water for agricultural purposes only.

4.5.2.1 Federal Regulations

Federal Endangered Species Act

Administered by the USFWS, the Federal Endangered Species Act (FESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 4(d), 7, and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation is required when there is a nexus between federally listed species' use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows issuance of permits for "incidental" take of endangered or threatened species. The term "incidental" applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. The MSHCP is the Section 10(a) permit for western Riverside County, including the study area.

Federal Clean Water Act, Section 404

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all Waters of the United States (WUS). Permitting for projects filling WUS, including wetlands and vernal pools, is overseen by USACE under Section 404 of the CWA. Projects may be permitted on an individual basis or may be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. Individual Permits typically require substantial time (often longer than six months) to review and approve, while Nationwide Permits are pre-

approved if a project meets the appropriate conditions. A CWA Section 401 Water Quality Certification, which is administered by the State Water Resources Control Board, must be issued prior to any 404 Permit.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the Federal *Migratory Bird Treaty Act* (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is used to place restrictions on disturbance of active bird nests during the nesting season, which is generally defined as January 15 to August 31. In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

Critical Habitat

As described by the FESA, critical habitat is the geographic area occupied by a threatened or endangered species essential to species conservation that may require special management considerations or protection. Critical habitat also may include specific areas not occupied by the species but that have been determined to be essential for species conservation.

Critical habitat does not occur on the Project area. The nearest critical habitat to the Project area is coastal California gnatcatcher critical habitat, which is approximately 0.80 miles to the northeast of the Project area.

4.5.2.2 State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the FESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of CESA authorizes the CDFW to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is the regional 2081 for this portion of the County, which includes the Project area. The golden eagle and white-tailed kite are considered state fully protected species. Fully protected species may not be taken or possessed at any time, and no state licenses or permits may be issued for their take except for collecting the species necessary for scientific research and relocation of the bird species for the protection of livestock (California Fish and Game Code Sections 3511, 4700, 5050, and 5515).

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates the collection, transport, and commerce of plants that are listed. The CESA followed the NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated threatened under the CESA.

California Fish and Game Code

Note the Department of Fish and Game has been renamed the CDFW, but the state laws still fall under, under Section 1600 of the Fish and Game Code, regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream, or lake, which supports fish or wildlife. The Code defines a stream, including creeks and rivers, as "a body of water that flows at least periodically or intermittently through a bed or channel having surface or subsurface flow that supports or has supported riparian vegetation." Lakes under the jurisdiction of CDFW may also include man- made features.

4.5.2.3 Local Regulations

Multiple Species Habitat Conservation Plan (MSHCP)/MSHCP Plan Fees

The MSHCP is a comprehensive multi-jurisdictional effort that includes Riverside County and multiple cities in western Riverside County. Rather than addressing sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system. Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the USFWS and/or CDFW. The MSHCP was adopted on June 17, 2003, by the Riverside County Board of Supervisors. The Incidental Take Permit was issued by both the USFWS and CDFW on June 22, 2004.

As outlined in Section 6 of the MSHCP, "Payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife and/or any other appropriate participating regulatory agencies and as set forth in the Implementing Agreement for the MSHCP."

The Western Riverside County Multiple Species Habitat Conservation Plan Mitigation Fee has been established to provide mitigation for biological impacts from projects within the MSHCP area. All building permit applicants may pay their Western Riverside County MSHCP mitigation fees at any time after having an approved land development permit for the County of Riverside Planning Division (ex: conditional use permit, public use permit, plot plan) and have also paid for building permit plan review or permit fees. Flood Control facility maintenance will be consistent with Sections 6.1.2, 6.1.3, 6.1.4, 6.3.2, 7.3.7, 7.5.3 and Appendix C of the MSHCP.

Payment of this fee is a standard condition (see **Standard Condition SC-BIO-1** in Section 4.5.5) and is not considered unique mitigation under CEQA.

Stephens' Kangaroo Rat Habitat Conservation Plan/Ordinance No. 663.10

The Habitat Conservation Plan (HCP) for Stephens' kangaroo rat describes the conservation, mitigation, and monitoring measures that are implemented within core reserves. Within the HCP, there are seven core reserves totaling 41,221 acres for conservation of Stephens'

kangaroo rat and associated habitat. The HCP provides a 30-year incidental take authorization for Stephens' kangaroo rat on lands within its boundaries, which includes 533,954 acres within the County and the Cities of Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside, and Temecula.

The Project area is within the Stephens' kangaroo rat HCP but is not located within any of the core reserves. Therefore, the Project is required to pay a Stephens' kangaroo rat mitigation fee for incidental take authorization under the Stephens' kangaroo rat HCP.

Riverside Ordinance No. 663 established the Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan Fee Assessment Area and Setting Mitigation Fees. The mitigation fees are as follows: All applicants for development permits within the boundaries of the Fee Assessment Area who cannot satisfy mitigation requirements through on-site mitigation as determined through the environmental review process shall pay a Mitigation Fee of $500.00 per gross acre of parcels proposed for development. However, for single-family residential development, wherein all lots within the development are greater than one-half (1/2) acre in size, a Mitigation Fee of $250.00 per residential unit shall be paid; and for agricultural development which requires a development permit excluding the construction of single-family residences in connection with said agricultural development, a Mitigation Fee of $100.00 or one percent (1%) of the valuation of the buildings to be constructed, whichever is greater shall be paid, provided that at no time shall such fee exceed the amount required to be paid if a fee of $500.00 per gross acre were applied to the parcel proposed for agricultural development. The determination of value or valuation of an agricultural building shall be made by the building official.

Payment of this fee is a standard condition (see **Standard Condition SC-BIO-2** in Section 4.5.5) and is not considered unique mitigation under CEQA.

4.5.2.4 County General Plan Goals and Policies

- **Policy OS 17.1** Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when conducting review of possible legislative actions such as general plan amendments, zoning ordinance amendments, etc. including policies regarding the handling of private and public stand alone applications for general plan amendments, lot line adjustments and zoning ordinance amendments that are not accompanied by, or associated with, an application to subdivide or other land use development application. Every stand alone application shall require an initial Habitat Evaluation and Acquisition Negotiation Process (HANS) assessment and such assessment shall be made by the Planning Department's Environmental Programs Division. Habitat assessment and species specific focused surveys shall not be required as part of this initial HANS assessment for stand alone applications but will be required when a development proposal or land use application to subsequently subdivide, grade or build on the property is submitted to the County.
- **Policy OS 17.2** Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when conducting review of development applications.
- **Policy OS 17.3** Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when developing transportation or other infrastructure projects that have been designated as covered activities in the applicable MSHCP.
- **Policy OS 18.1** Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's and through implementing related

Riverside County policies.

- **Policy OS 18.2** Provide incentives to landowners that will encourage the protection of significant resources in the county beyond the preservation and/or conservation required to mitigate project impacts. (AI 9)
- **Policy OS 18.3** Prohibit the planting or introduction of invasive, non-native species to watercourses, their banks, riparian areas, or buffering setbacks.
- **Policy OS 18.4** Develop standards for the management of private conservation easements and conservation lots in fee title. For areas with watercourses, apply special standards a – f (below) for their protection, and apply standards g-j (below) generally:
  a. For conservation lands with watercourses, conform easement boundaries to setback conditions that will preserve natural flows and changes in the natural boundaries of a watercourse and its protective riparian habitat.
  b. Use only "open" fencing that permits the movement of wildlife, and limit fencing to locations outside of setbacks to watercourses (no fencing is permitted to cross the banks or channel of a watercourse, unless no other option is available).
  c. Allow fuel modification only to the outside of buffering vegetation (riparian vegetation and vegetation on slopes that buffer the watercourse from erosion and storm water pollution).
  d. No planting of non-native invasive species is permitted.
  e. No lighting of watercourse area is permitted.

4.5.3 Thresholds of Significance

As discussed in Section 4.5.1, the Project impacts to six (6) criteria pertaining to biological resources will be analyzed. The Project would have a significant impact if it would:

7. Wildlife & Vegetation.

a. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?
b. Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?
c. 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. Wildlife Service?
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?
e. 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?
f. 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?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The

potential biological resources changes in the environment are addressed in response to the above thresholds in the following analysis.

4.5.4 Potential Impacts

THRESHOLD 7.a: 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?

Less Than Significant Impact with Mitigation Incorporated

The Project area is within the MSHCP. The Project area is not located within or adjacent to a MSHCP Criteria Area; therefore, the Project area is not subject to special conservation requirements that apply to cells and is not required to undergo the HANS process. The following sections demonstrate the Project's compliance with MSHCP requirements.

Riparian/Riverine Areas and Vernal Pools (MSHCP Section 6.1.1)

Section 6.1.2 of the MSHCP focuses on protection of Riparian/Riverine areas and Vernal Pool habitats capable of supporting MSHCP covered species, particularly within the identified Conservation Area. Section 6.1.2 of the MSHCP states:

> "*The purpose of the procedures described in this section is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained.*"

The agricultural ditches on the Project area do not meet the definition of MSHCP Riparian/Riverine or Vernal Pools since they do not accept flows from fresh water sources and lack three-parameter wetlands. Therefore, no MSHCP Riparian/Riverine or Vernal Pools would be impacted.

Suitable habitat for four MSHCP Riparian/Riverine and Vernal Pool species was observed within the agricultural ditches, including smooth tarplant, spreading navarretia, Riverside fairy shrimp, and vernal pool fairy shrimp. No spreading navarretia were observed within the ditches. A total of three smooth tarplant individuals were observed within the agricultural ditch. Although smooth tarplant is a MSHCP Riparian/Riverine and Vernal Pool species, the agricultural ditch was not identified as a Riparian/Riverine resource due to lack of connection with a fresh water source and absence of three-parameter wetlands. Smooth tarplant does not carry a federal or state listing as threatened or endangered. Smooth tarplant is a conditionally covered species under the MSHCP. Surveys for this species are required if a project occurs within a Criteria Area Species Survey Area (CASSA) 1, 2, 3, or 4. Since the Project area is not located within a CASSA, impacts to this species would be covered under the MSHCP.

Dry season fairy shrimp surveys were conducted within the agricultural ditch located near the northern project boundary, which were negative for sensitive fairy shrimp species (Riverside fairy shrimp and vernal pool fairy shrimp). Since no sensitive fairy shrimp species were detected, no significant impacts to sensitive fairy shrimp species are anticipated by the Project. Since no MSHCP Riparian/Riverine and Vernal Pool Resources were identified on the study

area and the study area is not located within a CASSA identified for smooth tarplant, the proposed Project is consistent with Section 6.1.2 of the MSHCP.

Narrow Endemic Plant Species (MSHCP Section 6.1.3)

The Project area is within Narrow Endemic Plant Species Area (NEPSSA) 4 and supports marginal habitat for San Diego ambrosia and spreading navarretia. These species were not observed on the Project area during the rare plant surveys. The Project area does not support suitable habitat for any other NEPSSA species and no NEPSSA species were observed during the rare plant surveys. Therefore, no NEPSSA species would be impacted and the proposed Project is consistent with Section 6.1.3 of the MSHCP.

Urban Wildland Interface Guidelines (MSHCP Section 6.1.4)

Proposed developments adjacent to MSHCP Conservation Areas may create edge effects than can impact conserved biological resources. The MSHCP provides several guidelines that address potential indirect effects from proposed developments that are in proximity to MSHCP Conservation Areas. These guidelines include measures addressing quantity and quality of runoff generated by the development (i.e., drainage and toxics), night lighting, noise, non-native invasive plant species, barriers to humans and animal predators, and grading/land development encroachment.

The Project area does not occur adjacent to land targeted for conservation, or next to existing MSHCP Conservation Areas. The nearest MSHCP Conservation Areas are located approximately 1.70 miles to the north and south. Existing development and/or active agricultural operations separate the Project area from MSHCP Conservation Areas. Since the study area is separated from the conservation areas, many of the Urban Wildland Interface Guidelines do not apply. As discussed below, the Project will comply with each applicable guideline to ensure consistency with MSHCP Section 6.1.4.

- Drainage

The Project area does not support any natural drainage systems but does support an agricultural ditch and a roadside ditch. The Project will incorporate measures to avoid discharge of untreated surface runoff into downstream waters. Measures will include those required for construction pursuant to the State Water Resources Control Board General Construction Stormwater Permit and those required post-construction pursuant to the National Pollutant Discharge Elimination System and Municipal Storm Drain requirements. These are standard conditions as reflected in **Standard Condition SC-HYD-1** and **Standard Condition SC-HYD-2** (see Section 4.10.5 of Subchapter 4.10, Hydrology and Water Quality, of this DEIR) and are not considered unique mitigation under CEQA. The Project shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes downstream from the Project area.

- Toxics

Land uses that use chemicals or generate bio-products that are potentially toxic or may adversely affect wildlife species, habitat, or water quality shall incorporate measures to ensure

that application of such chemicals does not result in discharge into downstream waters. Measures such as those employed to address drainage issues would be implemented by the proposed project to avoid the potential impacts of toxics. These measures are discussed immediately above.

- Lighting

Although the Project area is not located within or directly adjacent to a MSHCP Conservation Area, two existing Conservation Areas are located less than two miles of the Project area. Temporary construction lighting and ambient lighting from the proposed development is required to be selectively placed, directed, and shielded away from the MSHCP Conservation Area. In addition, large spotlight-type lighting directed into conserved habitat will be prohibited. These are standard conditions as reflected in **Standard Condition SC-AES-2** and **Standard Condition SC-AES-3** (see Section 4.2.5 of Subchapter 4.2, Aesthetics, of this DEIR) and are not considered unique mitigation under CEQA.

- Noise

The Project does not occur directly adjacent to MSHCP Conservation Areas, which are separated by agricultural fields and/or existing development. Therefore, noise standards are not applicable.

- Invasives

The Project shall not use invasive plants for erosion control, landscaping, wind rows, or other purposes. The Project is required to comply with the MSHCP and avoid the use of invasive, non-native plants in accordance with MSHCP Table 6.2. This is a standard condition and is not considered unique mitigation under CEQA.

- Barriers

Since the study area is not directly adjacent to the MSHCP Conservation Area, barriers or signage are not necessary.

- Grading/Land Development

The Project is not adjacent to an existing or proposed MSHCP Conservation Areas. Therefore, manufactured slopes associated with proposed Project will not extend into a MSHCP Conservation Area.

<u>Additional Surveys (MSHCP Section 6.3.2)</u>

The Project area is not within a CASSA or an amphibian or mammal survey area. No impacts to CASSA rare plant species or sensitive amphibian or mammal species are proposed. The Project area is within the MSHCP Burrowing Owl Survey Area and the Project area supports suitable habitat. Focused surveys were conducted in accordance with the County's survey protocol. No burrowing owls or sign of burrowing owls were observed within the Project area. Due to the presence of suitable habitat, a pre-construction survey is required within 30 days of ground disturbance pursuant to the MSHCP.

Implementation of **Mitigation Measure MM-BIO-1** and **MM-BIO-2**, as outlined in Section 4.5.5, will ensure that potential impacts to burrowing owls are reduced to less than significant levels by requiring that a preconstruction survey for burrowing owl is prepared no more than 30 days prior to ground disturbance, in accordance with MSHCP survey requirements.

With incorporation of **Mitigation Measure MM-BIO-1** and **MM-BIO-2**, Project impacts would be reduced to less than significant level such that the Project would not conflict with the MSHCP (the adopted Habitat Conservation Plan).

The Project area is also within the Stephens' kangaroo rat HCP but is not located within any of the core Reserves. Therefore, the Project is required to pay a Stephens' kangaroo rat mitigation fee for incidental take authorization under the Stephens' kangaroo rat HCP.

Payment of the Stephens' Kangaroo Rat Fee, and the MSHCP Mitigation Fee and are mandatory. **Standard Condition SC-BIO-1** and **Standard Condition SC-BIO-2** (see Section 4.5.5), require the Project applicant to pay these fees prior to the issuance of a grading permit and building permit, respectively. Payment of this fee is not considered unique mitigation under CEQA.

The proposed Project is consistent with MSHCP Section 6.3.2.

Fuels Management (MSHCP Section 6.4)

The Project area is not adjacent to an MSHCP Conservation Area. Therefore, fuel modification impacts would not extend into a Conservation Area. The Project is consistent with MSHCP Section 6.4.

Based on the information above, through adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, as well as implementation of **Mitigation Measures MM-BIO-1** and **MM-BIO-2** the Project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Impacts will be reduced to a less than significant level.

THRESHOLD 7.b: Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

Less Than Significant Impact with Mitigation Incorporated

Sensitive Species

- Rare Plant Species

Smooth tarplant does not carry a federal or state listing as threatened or endangered. Smooth tarplant is a conditionally covered species under the MSHCP. Smooth tarplant is identified by the MSHCP as a Riparian/Riverine plant species. Surveys for this species are required if a

project occurs within a CASSA 1, 2, 3, or 4. Since the Project area is not located within a CASSA, impacts to this species would be covered under the MSHCP. The Project will impact the smooth tarplant (see **Figure 4.5-4, *Impact to Smooth Tarplant***). Permanent loss of three individuals would not threaten regional population numbers and impacts to this species. Impacts will be less than significant.

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FIGURE 4.5-4
IMPACT TO SMOOTH TARPLANT

Source: GBRA Report (**Appendix D**)

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- Sensitive Wildlife Species

Dry season fairy shrimp surveys were conducted within the agricultural ditch located in the northern portion of the Project site. The surveys were conducted for the San Pedro Farms project located the north of the Project site. Surveys were conducted in September 2015. The dry season surveys were conducted following USFWS's Survey Guidelines for Listed Large Branchiopods. No listed fairy shrimp eggs were collected from the agricultural ditch during the survey.

Of the 48 species recorded within the vicinity of the study area, 35 species are considered to have no potential to occur on the Project area due to lack of suitable habitat and four species are not expected to occur due to lack of suitable habitat for residence and/or breeding but may disperse through or across the study area. Therefore, no significant impacts to these sensitive wildlife species are anticipated by the Project.

Of the remaining nine sensitive wildlife species, four species were determined to have a low potential to occur (western spadefoot toad, coastal whiptail, white-tailed kite, and western mastiff bat), two species were determined to have a moderate potential to occur (loggerhead shrike and San Diego black-tailed jackrabbit), and three species are presumed currently absent from the study area based on negative survey results (vernal pool fairy shrimp, Riverside fairy shrimp, and burrowing owl).

Western spadefoot, coastal whiptail, white-tailed kite, loggerhead shrike, and San Diego black-tailed jackrabbit are fully covered species under the MSHCP. With payment of the MSHCP Local Development Mitigation Fee (LDMF), no additional mitigation is required for potential impacts to these species. In addition, the study area is located within the Stephens' kangaroo rat HCP and is required to pay a Stephens' kangaroo rat mitigation fee for incidental take authorization under the Stephens' kangaroo rat HCP. Payment of the Stephens' Kangaroo Rat Fee, and the MSHCP Mitigation Fee and are mandatory. **Standard Conditions SC-BIO-1** and **SC-BIO-2** (see Section 4.5.5), require the Project applicant to pay these fees prior to the issuance of a grading permit and building permit, respectively. Payment of this fee is not considered unique mitigation under CEQA.

Although western mastiff bat is not a MSHCP covered species, this species is listed as a SSC by CDFW and does not carry a federal or state listing as threatened or endangered. The Project area does not support suitable roosting habitat for western mastiff bat. There is some potential for foraging habitat, although the habitat is considered low quality based on the high-level of existing disturbance on the Project area and surrounding vicinity. The nearest observation of this species on CNDDB was recorded in 1990, approximately 3.2 miles to the northwest of the Project area in Sun City. Based on the presence of low quality habitat, lack of recent observations, and absence of suitable roosting habitat, no significant impacts to western mastiff bat are anticipated by the Project.

Burrowing owl is considered a SSC and MSHCP conditionally covered species. Since the Project area supports suitable habitat for burrowing owl, focused surveys were conducted in accordance with the County's survey protocol. No burrowing owls or sign of burrowing owls were observed on the Project area during the 2017 or 2018 focused surveys. Implementation of **Mitigation Measures MM-BIO-1** and **MM-BIO-2**, as outlined in Section 4.5.5, will ensure that potential impacts to burrowing owls are reduced to less than significant levels by requiring that a

preconstruction survey for burrowing owl is prepared no more than 30 days prior to ground disturbance, in accordance with MSHCP survey requirements.

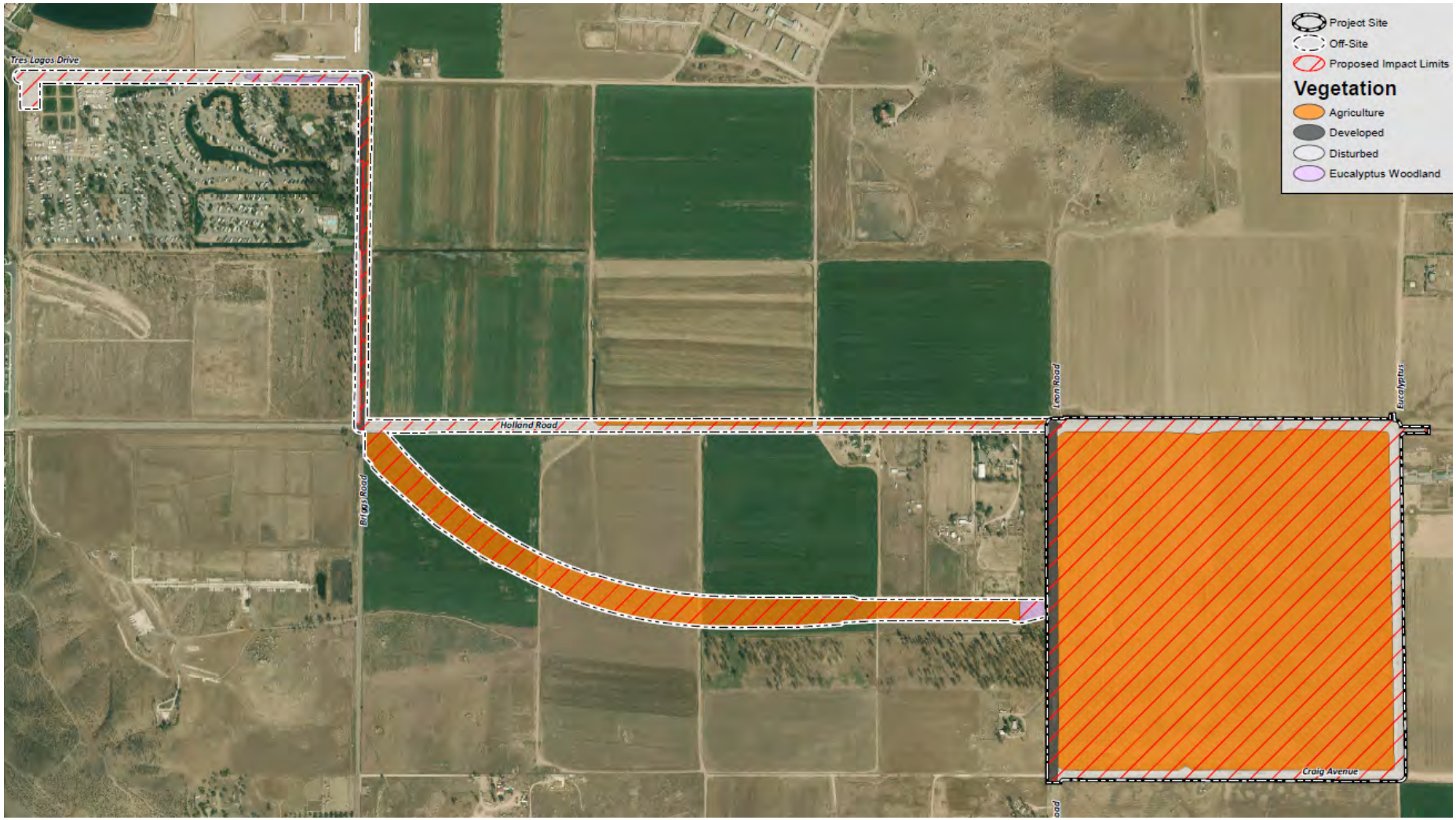
Dry season fairy shrimp surveys were conducted within the agricultural ditch located in the northern portion of the Project site, as required by the County for the San Pedro Farms project located to the north of the Project site. The dry season surveys were negative for sensitive fairy shrimp species (Riverside fairy shrimp and vernal pool fairy shrimp). Since no sensitive fairy shrimp species were detected, no significant impacts will occur to sensitive fairy shrimp species as a result of the Project.

Sensitive Vegetation Communities

- California Department of Fish and Wildlife Sensitive Vegetation Communities/Habitats

Impacts to vegetation are shown on **Figure 4.5-5, *Impacts to Vegetation***. The Project area does not support any vegetation communities or habitats considered sensitive by CDFW. Therefore, no impacts will occur.

FIGURE 4.5-5
IMPACTS TO VEGETATION



Source: GBRA Report (**Appendix D**)

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- California Department of Fish and Wildlife Riparian Habitat and Streambed

The Project will result in permanent impacts to approximately 0.14 acre of CDFW jurisdiction within the agricultural ditch. No temporary or permanent impacts are proposed to the roadside ditch. Proposed impacts to CDFW Jurisdiction are shown on **Figure 4.5-6, Impacts to Jurisdictional Features**, and were summarized in **Table 4.5-2, *Jurisdictional Features***.

Impacts to CDFW jurisdiction will require a Section 1602 Stream Alteration Agreement from the CDFW, as described in **Mitigation Measure MM-BIO-3** (see Section 4.5.5). Compensatory mitigation for permanent impacts to CDFW jurisdiction will be required as part of subsequent Section 1602 permitting requirements. With incorporation of **Mitigation Measure MM-BIO-3**, impacts will be reduced to a less than significant level.

- U.S. Army Corps Of Engineers/Regional Water Quality Control Board Jurisdiction

Although 0.01 acre of USACE/RWQCB WUS was delineated within the roadside ditch, the Project will avoid permanent and temporary impacts to WUS (see **Figure 4.5-6, *Impacts to Jurisdictional Features***). Impacts are proposed to the agricultural ditch; however, this feature does not support USACE/RWQCB jurisdiction based on lack of jurisdictional field indicators (e.g., OHWM). Therefore, no impacts to USACE/RWQCB WUS will occur from the Project.

Based on the information above, through adherence to **Standards Conditions SC-BIO-1** and **SC-BIO-2**, as well as implementation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** the Project will not have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12). Impacts will be reduced to a less than significant level.

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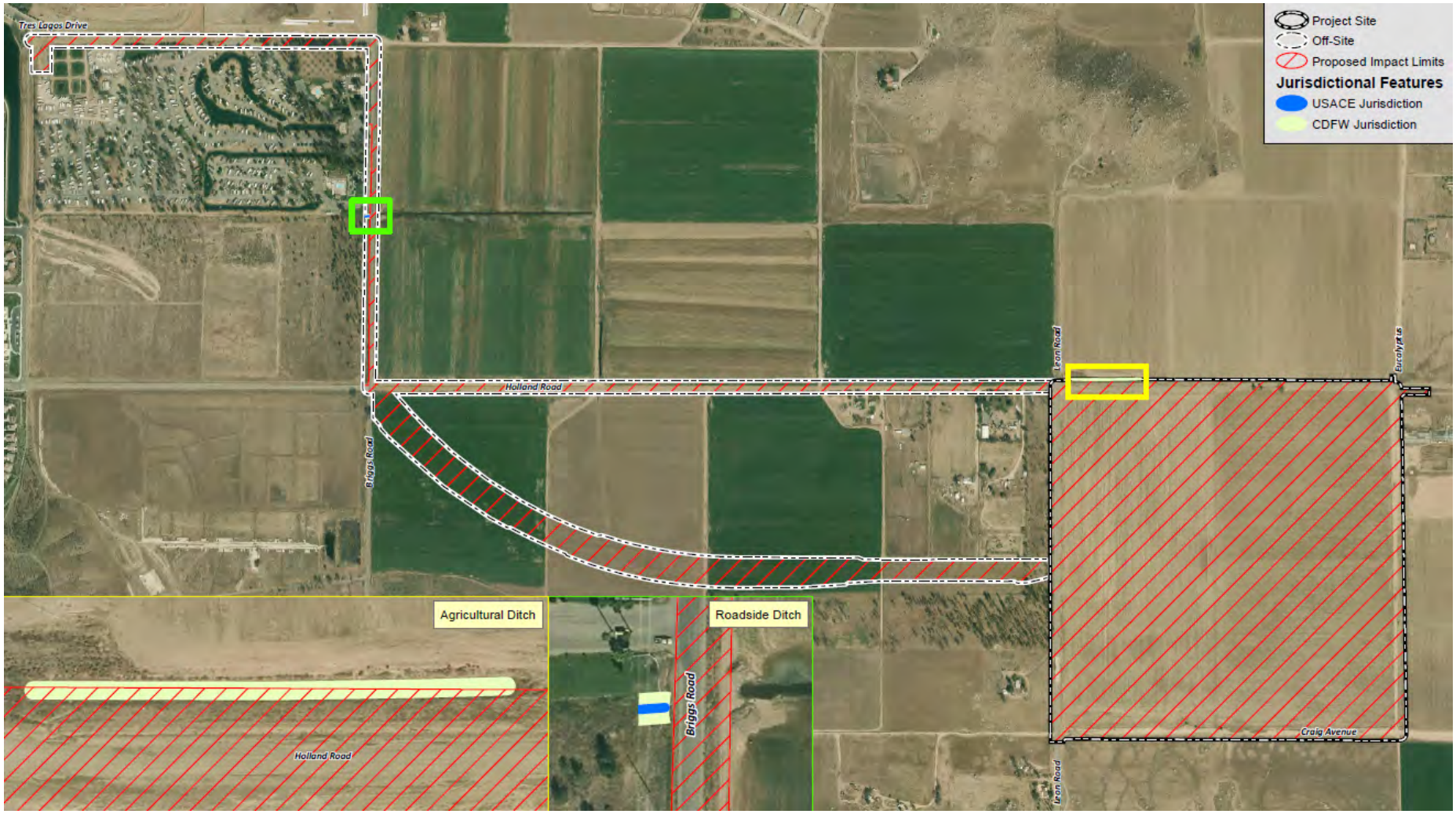
FIGURE 4.5-6
IMPACTS TO JURISDICTIONAL FEATURES



Source: GBRA Report (**Appendix D**)

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THRESHOLD 7.c: 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. Wildlife Service?

Less Than Significant Impact with Mitigation Incorporated

Please reference the discussion in Threshold 7.b. Based on the information above, through adherence to **Standards Conditions SC-BIO-1** and **SC-BIO-2**, as well as implementation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** the Project will not 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. Wildlife Service. Impacts will be reduced to a less than significant level.

THRESHOLD 7.d: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact with Mitigation Incorporated

The Project area not part of a regional corridor and does not serve as a nursery site. The Project site is not identified by the MSHCP or South Coast Missing Linkages as being part of a local or regional corridor or linkage. The Project area has no direct connectivity to large blocks of habitat and is constrained by existing agricultural and development to the north, south, east, and west.

Development of the proposed Project could disturb or destroy active migratory bird nests, including eggs and young. Disturbance to or destruction of migratory bird eggs, young, or adults is in violation of the Migratory Bird Treaty Act (MBTA) and is considered a potentially significant impact. Although suitable habitat for nesting birds on the Project area is limited, trees and herbaceous vegetation located within eucalyptus woodland and disturbed areas offer nesting habitat for protected nesting bird species. In addition, the agricultural field may support suitable habitat for ground nesting bird species. **Mitigation Measure MM-BIO-2** (see Section 4.5.5), will ensure Project compliance with MBTA regulations. With the incorporation of **Mitigation Measure MM-BIO-2**, the Project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts will be reduced to a less than significant level.

THRESHOLD 7.e: 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?

Less Than Significant Impact with Mitigation Incorporated

Please reference the discussion in Threshold 7.b, above. Based on the information above, through adherence to **Standards Conditions SC-BIO-1** and **SC-BIO-2**, as well as implementation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** the Project will not 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. Impacts will be reduced to a less than significant level.

THRESHOLD 7.f: 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?

Less Than Significant Impact with Mitigation Incorporated

Please reference the discussion in Threshold 7.b, above. Based on the information above, through adherence to **Standards Conditions SC-BIO-1** and **SC-BIO-2**, as well as implementation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3** the Project will not 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. Impacts will be reduced to a less than significant level.

4.5.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The following standard conditions shall apply to the Project as they pertain to Biological resources. These standard conditions are not considered unique to this Project, as they apply to all projects in the Project vicinity.

SC-BIO-1: SKR Fees. Prior to the issuance of a grading permit, the Project applicant shall pay the SKR Fee (established to provide mitigation for impacts to the SKR from projects within the SKR Fee area).

SC-BIO-2 MSHCP Fee Fees. Prior to the issuance of a building permit, the Project applicant shall pay the Western Riverside County Multiple Species Habitat Conservation Plan Mitigation Fee (established to provide mitigation for biological impacts from projects within the MSHCP area).

Mitigation Measure(s)

The following mitigation measures shall be implemented to reduce Project impacts to the burrowing owl and migratory birds to a less than significant level.

MM-BIO-1: Pursuant to Objectives 6 & 7 of the Species Account for the Burrowing Owl included in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), within 30 days prior to the issuance of a grading permit, a pre-construction presence/absence survey for the burrowing owl shall be conducted by a qualified biologist and the results provided in writing to the Environmental Programs Department. If it is determined that the project site is occupied by the Burrowing Owl, take of "active" nests shall be avoided pursuant to the MSHCP and the Migratory Bird Treaty Act. However, when the Burrowing Owl is present, relocation outside of the nesting season (February 1 through August 31) by a qualified biologist shall be required. The County Biologist shall be consulted to determine appropriate type of relocation (active or passive) and translocation sites. A grading permit may be issued once the species has been relocated. If the grading permit is not obtained within 30 days of the survey, a new survey shall be required.

MM-BIO-2: Birds and their nests are protected by the Migratory Bird Treaty Act (MBTA) and California Department of Fish and Wildlife (CDFW) Codes. Since the project supports suitable nesting bird habitat, removal of vegetation or any other potential nesting bird habitat disturbances shall be conducted outside of the avian nesting season (February 1st through August 31st). If habitat must be cleared during the nesting season, a preconstruction nesting bird survey shall be conducted. The preconstruction nesting bird survey must be conducted by a biologist who holds a current MOU with the County of Riverside. If nesting activity is observed, appropriate avoidance measures shall be adopted to avoid any potential impacts to nesting birds. The nesting bird survey must be completed no more than 3 days prior to any ground disturbance. If ground disturbance does not begin within 3 days of the survey date a second survey must be conducted. Prior to the issuance of a grading permit the project proponent must provide written proof to the Riverside County Planning Department, Environmental Programs Division (EPD) that a biologist who holds an MOU with the County of Riverside has been retained to carry out the required survey. Documentation submitted to prove compliance prior to grading permit issuance must at a minimum include the name and contact information for the Consulting Biologist and a signed statement from the Consulting Biologist confirming that they have been contracted by the applicant to conduct a Preconstruction Nesting Bird Survey. In some cases EPD may also require a Monitoring and Avoidance Plan prior to the issuance of a grading permit. Prior to finalization of a grading permit or prior to issuance of any building permits the projects consulting biologist shall prepare and submit a report, documenting the results of the survey, to EPD for review.

MM-BIO-3: Prior to issuance of grading permits, the applicant must provide

documentation demonstrating that streambed permits have been applied for. This would include a Notification of Lake or Streambed Alteration was submitted to the California Department of Fish and Wildlife pursuant to Fish and Game Code section 1602. If CDFW determines that a Lake or Streambed Alteration Agreement is required as a result of the Notification process, the applicant shall provide the final Agreement documentation. Also, a 401 Certification from Regional Water Quality Control Board shall be applied for and the final agreement documentation shall be provided to EPD. When the requested documents are completed and ready for EPD review, please upload them to our Secure File Transfer server to ensure prompt response and review. If you are unfamiliar with the process for uploading biological documents to the FTP site, please contact Matthew Poonamallee at mpoonama@rivco.org and Teresa Harness at tharness@rivco.org for instructions. Biological documents not uploaded to the FTP site may result in delayed review and approval.

4.5.6 Cumulative Impacts

Cumulative biological impacts are defined as those impacts resulting from the development within the MSCHP Plan Area as a result of build out of the Cities and County's General Plans. The MSHCP establishes the management of biological resources in western Riverside County that defines cumulative biological resource values and measures the loss of biology resources that constitutes a cumulative adverse impact.

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently exists or can occur on the site or in the surrounding vicinity. The proposed Project will not cause adverse cumulative effects related to the reduction of sensitive vegetation communities or degradation of other biology values present in western Riverside County.

With adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1, MM-BIO-2,** and **MM-BIO-3**, the Project will have a less than significant 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 Wildlife or U.S. Fish and Wildlife Service; will not substantially interfere 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; and will have no significant impacts (including cumulative impacts) as it pertains to effects 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 Wildlife or US Fish and Wildlife Service; or 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 stated in the IS, there are no oak trees on the Project site. The County's Oak Tree Management Guidelines would not be applicable. The provisions of Ordinance No. 559 would not apply since the Project site is not above 5,000 feet in elevation. No other tree preservation policy or ordinance apply to the Project site. Therefore, implementation of the Project will not conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance. No impacts will occur. Therefore, there will be no cumulative

impacts.

There are no significant biology resources located within the Project site and the Project can be implemented consistent with the criteria identified in the MSHCP, with adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2*,*** and **MM-BIO-3**.

Based on adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2*,*** and **MM-BIO-3**, and the overall lack of any habitat to support sensitive species or a substantial wildlife population, the proposed Project will not result in adverse cumulative biology resource impacts that rise to a cumulatively considerable level. Project biology impacts are less than significant.

4.5.7 Unavoidable Significant Adverse Impacts

Due to the lack of significant biological resources within the proposed Project site, the Project is not forecast to cause any direct significant unavoidable adverse impact to sensitive biological resources. With adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2*,*** and **MM-BIO-3**, the Project has been determined to be consistent with the MSHCP. Thus, based on the lack of significant onsite biological resources and the mitigation that must be implemented to control potential site-specific impacts on biological resources, the proposed Project is not forecast to cause significant unavoidable adverse impacts to biological resources. Project biology impacts are less than significant.

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4.6 CULTURAL RESOURCES

4.6.1 Introduction

This Subchapter will evaluate the environmental impacts from implementation of the Project to the issue area of cultural resources. The Cultural Resources Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

8. Historic Resources.
   a. Alter or destroy an historic site?
   b. Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5?

9. Archaeological Resources.
   a. Alter or destroy an archaeological site?
   b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?
   c. Disturb any human remains, including those interred outside of formal cemeteries?
   d. Restrict existing religious or sacred uses within the potential impact area?

Based on the analysis in the IS it was determined that the question pertaining to issue area 9.c. related to cultural resources (in the questions asked above) **would not** require any further analysis in the DEIR. As it pertains to this question, the IS identified a "less than significant impact" as a result of implementation of the Project.

Based on the analysis in the IS, it was determined that the remaining five (5) issue areas related to cultural resources in the questions asked above **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The text contained in issue area 8.b. was revised; this text revision will be reflected in the analysis below.

Additionally, issue area 9.d. was deleted from the IS checklist and will not be analyzed in the DEIR.

Therefore, the following four (4) issue areas will be analyzed in the DEIR:

8. Historic Resources.
   a. Alter or destroy an historic site?
   b. Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations, Section 15064.5?

9. Archaeological Resources.
a. Alter or destroy an archaeological site?
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?

Standard Condition SC-CUL-1, presented in the IS that shall be carried over to this DEIR. There are no mitigation measures presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *Assembly Bill 52 (AB 52) Formal Notification (TTM 37439, CZ 1800007)*, prepared by County of Riverside, April 2, 2018 (**Appendix L**)
- *A Phase I Cultural Resources Assessment of Tentative Tract No. 37439 and Associated Off-Site Infrastructure Improvements*, prepared by Jean A. Keller, Ph.D., March 2018 (*CRA*, **Appendix E**)
- *Riverside County General Plan (Multipurpose Open Space Element)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- *Sun City/Menifee Valley Area Plan, December 13, 2016 (SCMVAP)* http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- *Title 14 California Code of Regulations (14 Cal. Code Regs.) §15064.5* https://www.dir.ca.gov/dlse/CCR.htm

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter #2 was received from the Native American Heritage Commission (dated October 12, 2018) regarding land use and planning in response to the NOP. Within this comment letter were the following comments pertaining to tribal cultural resources:

- The lead agency (County) must consult with all Tribes that are traditionally and culturally affiliated with the Project's geographical area as early as possible to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.
- Utilize the CEQA Guidelines for consultation pursuant to Assembly Bill 52 (AB52).
- Utilize CEQA Guidelines for consultation pursuant to Senate Bill 18 (SB18).
- Utilize the following recommendations for Cultural Resources Assessments:
  - Contact the appropriate regional California Historical Research Information System Center for an archaeological records search.
  - Conduct an archaeological inventory survey, if required, and submit report per requirements.
  - Contact Native American Heritage Commission for a Sacred Lands File search and for a Native American Tribal Consultation List to inform consultation and plan for avoidance, preservation in place, or failing both, mitigation.

Response: Consistent with AB52 and SB18, consultation has occurred with the Tribes that are traditionally and culturally affiliated with the Project's geographical area. Please refer to the

detailed discussion in Subchapter 4.17, Tribal Cultural Resources, of this DEIR. Recommendations for Cultural Resources Assessments were utilized in the A Phase I Cultural Resources Assessment of Tentative Tract No. 37439 and Associated Off-Site Infrastructure Improvements, prepared by Jean A. Keller, Ph.D., March 2018.

No comments regarding cultural resources were received at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 8.a, 8.b, 9.a and 9.b, and the issues identified in the NOP/IS are the focus of the following evaluation of cultural resources.

All the Tables and Figures in this Subchapter are from the *Phase I Cultural Resources Assessment*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical studies, which are provided in Volume 2 of the DEIR, the Technical Appendices.

4.6.2 Environmental Setting

4.6.2.1 Existing Conditions

4.6.2.1.a Topography and Geology

The proposed Project is located near Winchester in western Riverside County. **Figure 4.6-1**, ***Location of Study Area***, below, identifies the Project location situated within a topographically diverse region defined by Bell Mountain to the west, Domenigoni Valley to the south and to the east, and Double Butte to the north. Virtually all drainage in the vicinity of the proposed Project has been channelized, but historically the drainage pattern has been in a southerly direction toward Warm Springs Creek, then to Murrieta Creek, and ultimately, the Santa Margarita River south of Temecula. Drainage is primarily intermittent, occurring only as the result of seasonal precipitation.

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FIGURE 4.6-1
LOCATION OF STUDY AREA

Source: CRA Report (**Appendix E**)

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Elevations across the Residential Project site average 1440 feet above mean sea level (AMSL), while those across most of the Off-site Project components average 1430 AMSL. A permanent source of water was not observed within the property boundaries, although a constructed ponding area is located at the northwestern corner of the off-site improvement area, slated for a lift station. The closest natural watercourse that represents a permanent water source is Warm Springs Creek, a USGS-designated blueline stream, located approximately 1.25 miles south of the Residential Project site.

The proposed Project is situated in the Perris Peneplain, a portion of the Northern Peninsular Range Province of Southern California. In general, the Perris Peneplain is a broad valley bounded on three sides by mountain ranges: the San Jacinto Mountains on the east, the San Bernardino Mountains on the north, and the Santa Ana Mountains on the southwest; the northwestern extent of the Perris Peneplain is the Santa Ana River. The Peneplain is a large depositional basin composed primarily of materials eroded from the granitic bedrock surfaces of the Southern California Batholith. The geological composition of the Project site is representative of the region as a whole, with alluvial fans and terraces formed by local granitic bedrock decomposition. Three small clusters of granitic bedrock outcrops are located near the south-central boundary of the Residential Project site but would not have been suitable for use in food processing, rock art, or shelter by indigenous peoples of the region. Native lithic materials, primarily granitics and quartz, are very sparse and none observed would have been considered suitable to for ground or flaked stone tool production by Native Americans who occupied this region. Some fieldstone has been removed from the Residential Project site and placed in piles along Holland Road; therefore, the amount of lithic material currently observed during the field survey is not representative of the property in its natural state. None of the fieldstone was of suitable quality for lithic tool production. Reference **Figure 4.6-2**, ***Aerial View of the Project Site (TTM 37439)***, **Figure 4.6-3**, ***View from the Northeast Property Corner Looking Southwest,*** **Figure 4.6-4**, ***View from the Southwest Property Corner Looking Northeast***, **and Figure 4.6-5**, ***Typical Landscapes in the Off-Site Improvement Areas.***

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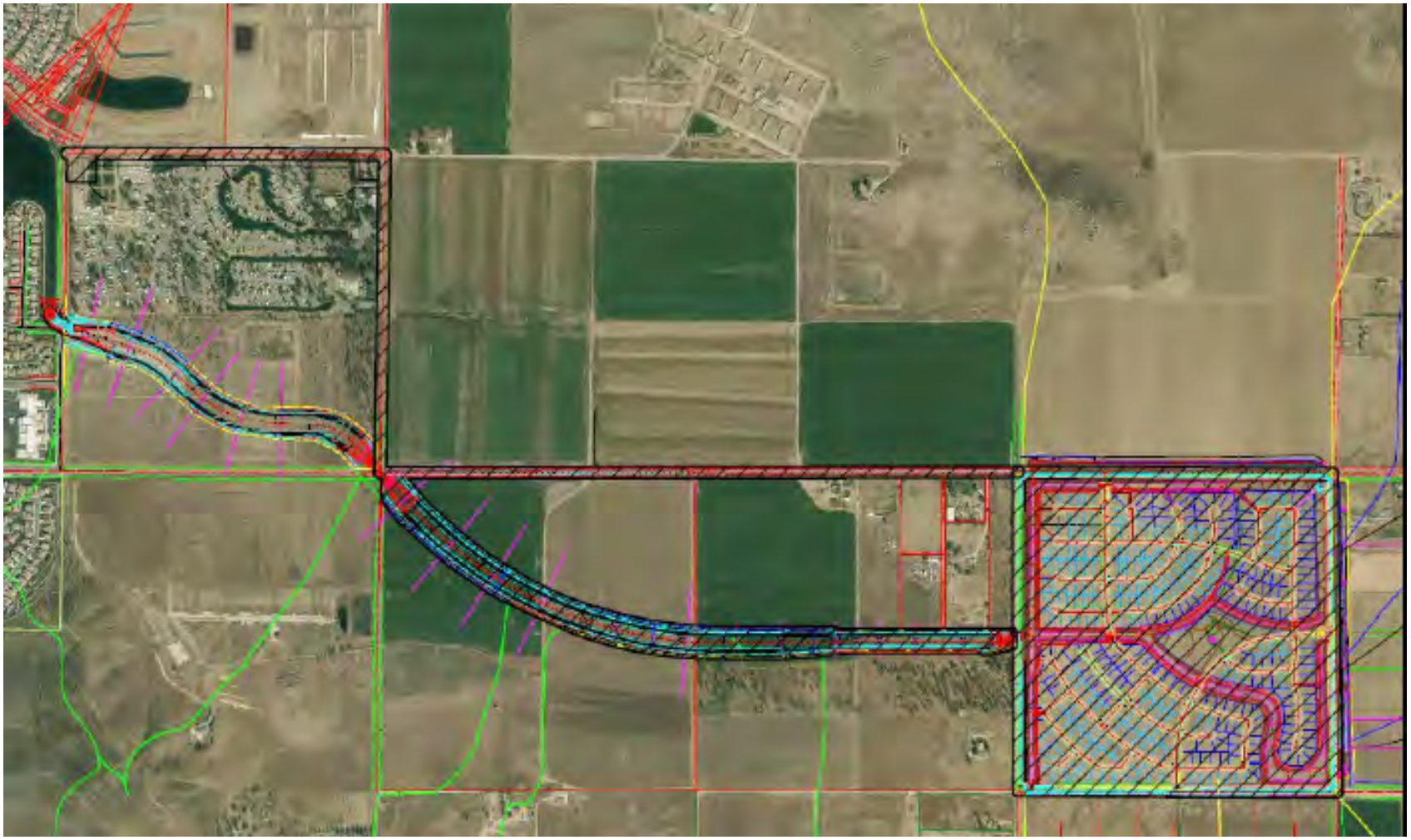
FIGURE 4.6-2
AERIAL VIEW OF THE PROJECT SITE (TR34739)



Source: CRA Report (**Appendix E**)

FIGURE 4.6-3
VIEW FROM THE NE PROPERTY CORNER LOOKING SOUTHWEST

Source: CRA Report (**Appendix E**)

FIGURE 4.6-4
VIEW FROM THE SOUTHWEST PROPERTY CORNER LOOKING NORTHEAST

Source: CRA Report (**Appendix E**)

FIGURE 4.6-5
TYPICAL LANDSCAPES IN THE OFF-SITE IMPROVEMENT AREAS

Typical landscapes in the off-site improvement areas. Clockwise from upper left: corner of Holland Road and Eucalyptus Avenue looking west; western end of unimproved portion of Tres Lagos looking east; a portion of the proposed lift station site; Craig Avenue looking east; looking north up Briggs Road from the corner of Briggs and Holland roads; from the beginning of the channel east of Leon Road looking west.

Source: CRA Report (**Appendix E**)

4.6.2.1.b Biology

The Project site has long been used for agricultural endeavors, possibly since the late 19th century. As a result, no native plants remain within its boundaries. At the time of the field survey, the western half of the property was planted in potatoes, while the eastern half was temporarily lying fallow. Most of the land which is slated for a proposed storm drain channel has also been farmed for many years, with the same resultant lack of native plants. A grove of eucalyptus trees has been planted on land encompassing the eastern portion of the proposed channel, with a grassland understory. Native plants remaining within the off-site improvement areas are limited to isolated stands of California buckwheat in the understory of the eucalyptus grove, in portions of road rights-of-way along some roads, and near the pond features. Prior to development of the road system and various agricultural endeavors, the land hosted diverse plant species representative of the native Riversidian Sage Scrub Plant Community, which predominates in this region. Characteristic plant species of this native community include white sage, black sage, California buckwheat, California sagebrush, scrub oak, chamise, and laurel sumac. Indigenous peoples of the region commonly used plants of this community for food, medicine, and implement production.

During both the prehistoric and historic periods an abundance of faunal species inhabited the study area. However, due to regional urbanization, the current faunal community is generally restricted to those species that can exist in proximity to humans, such as valley pocket gopher, Audobon's cottontail, California ground squirrel, coyote, western fence lizard, and occasionally, mule deer.

4.6.2.1.c Climate

The climate of the Project area is that typical of cismontane Southern California, which is warm, and rather dry. This climate is classified as Mediterranean or "summer-dry subtropical." Temperatures seldom fall below freezing or rise above 100 degrees Fahrenheit. The rather limited precipitation received occurs primarily during the summer months.

4.6.2.1.d Discussion of Environmental Setting

The entirety of the Project site has been altered by grading, construction, agricultural endeavors, grazing, paving, refuse deposits, and periodic vegetation clearance. Therefore, it is difficult to determine whether adequate resources would have been available to support indigenous populations of the region. Based on resources found on undeveloped land in its vicinity, it is probable that floral and faunal resources would have offered some opportunities to Native Americans for procuring food, as well as components for medicines, tools, and construction materials. Bedrock outcrops suitable for use in food processing, rock art, or shelter are not present within the Project boundaries. Although bedrock outcrops suitable for use by indigenous peoples are abundant on the hills surrounding the Project site, the topography between those areas and the Project site is very dissimilar, so it is unlikely that additional bedrock existed on the Project site prior to development. Loose lithic material is very sparse and none of that observed would have been suitable for ground or flaked stone tool production. It is probable that additional lithic materials existed on the Project site prior to development, as indicated by fieldstone piled along Holland Road, but even that material did not appear suitable

for lithic tools production. A permanent source of water is not located within the Project boundaries.

Finally, the types of defensive location preferred by Native peoples of the region for long-term habitation are not present in areas encompassed by either the Residential Project site or the Off-site Project components. Due to the relative lack of available natural resources, it is likely that the Project site would only have been utilized for seasonal resource exploitation by indigenous peoples of the region and not for long-term occupation.

Criteria for occupation during the historical era were generally somewhat different than for aboriginal occupation since later populations did not depend solely on natural resources for survival. During the historical era, the Project site would probably have been considered very desirable due to the flat topography, tillable soil, and its proximity to urban centers and major transportation corridors.

4.6.2.2 Cultural Setting

The following is a description of the environmental setting with regard to the prehistory and the history applicable to the Project site.

4.6.2.2.a Prehistory

On the basis of currently available archaeological research, occupation of Southern California by human populations is believed to have begun at least 10,000 years ago. Theories proposing much earlier occupation, specifically during the Pleistocene Age, exist but at this time archaeological evidence has not been fully substantiating. Therefore, for the purposes of this analysis, only human occupation within the past 10,000 years will be addressed.

A time frame of occupation may be determined on the basis of characteristic cultural resources. These comprise what are known as cultural traditions or complexes. It is through the presence or absence of time-sensitive artifacts at a particular site that the apparent time of occupation may be suggested.

In general, the earliest established cultural tradition in Southern California is accepted to be the San Dieguito Tradition. The San Dieguito people were nomadic large-game hunters whose tool assemblage included large domed scrapers, leaf- shaped knives and projectile points, stemmed projectile points, chipped stone crescentics, and hammerstones. The San Dieguito Tradition was further divided into three phases: San Dieguito I is found only in the desert regions, while San Dieguito II and III occur on both sides of the Peninsular Ranges. These three phases formed a sequence in which increasing specialization and refinement of tool types were the key elements. Although absolute dates for the various phase changes have not been hypothesized or fully substantiated by a stratigraphic sequence, the San Dieguito Tradition is believed to have existed from approximately 7000 to 10,000 years ago.

Throughout southwestern California, the La Jolla Complex followed the San Dieguito Tradition. The La Jolla Complex is recognized primarily by the presence of milling-stone assemblages within shell middens. Characteristic cultural resources of the La Jolla Complex include basined

milling-stones, unshaped manos, flaked stone tools, shell middens, and a few Pinto-like projectile points. Flexed inhumations under stone cairns, with heads pointing north, are also present.

The La Jolla Complex existed from 5500 to 1000 B.C. Although there are several hypotheses to account for the origins of this complex, it would appear that it was a cultural adaptation to climatic warming after c. 6000 B.C. This warming may have stimulated movements to the coast of desert peoples who then shared their milling-stone technology with the older coastal groups. The La Jollan economy and tool assemblage seems to indicate such an infusion of coastal and desert traits instead of a total cultural displacement.

The Pauma Tradition may be an inland variant of the La Jolla Complex, exhibiting a shift to a hunting and gathering economy, rather than one based on shellfish gathering. Implications of this shift are an increase in number and variety of stone tools and a decrease in the amount of shell. At this time, it is not known whether the Pauma Complex represents the seasonal occupation of inland sites by La Jollan groups or whether it represents a shift from a coastal to a non-coastal cultural adaptation by the same people.

The late period is represented by the San Luis Rey Complex. This Complex may be divided into two periods: San Luis Rey I (A.D. 1400-1750) and the San Luis Rey II (A.D. 1750-1850). The San Luis Rey I type component includes cremations, bedrock mortars, milling-stones, small triangular projectile points with concave bases, bone awls, stone pendants, Olivella shell beads, and quartz crystals. The San Luis Rey II assemblage is the same as San Luis Rey I, but with the addition of pottery vessels, cremation urns, tubular pipes, stone knives, steatite arrow straighteners, red and black pictographs, and such non-aboriginal items as metal knives and glass beads. Inferred San Luis Rey subsistence activities include hunting and gathering with an emphasis on acorn harvesting.

4.6.2.2.b Ethnography

According to available ethnographic research, the Project area was included in the known territory of the Shoshonean-speaking Luiseño Indians during both prehistoric and historic times. The name Luiseño is Spanish in origin and was used in reference to those aboriginal inhabitants of Southern California associated with the Mission San Luis Rey. As far as can be determined, the Luiseño, whose language is of the Takic family (part of Uto-Aztecan linguistic stock) had no word naming for their nationality.

The territory of the Luiseño was extensive, encompassing over 1500 square miles of coastal and inland Southern California. Known territorial boundaries extended on the coast from Aliso Creek on the north to Agua Hedionda Creek on the south, then inland to Santiago Peak, across to the eastern side of the Elsinore Fault Valley, southward to the east of Palomar Mountain, and finally, around the southern slope of the Valley of San Jose. Their habitat included every ecological zone from sea level to 6000 mean feet above sea level.

Territorial boundaries of the Luiseño were shared with the Gabrieliño and Serrano to the north, the Cahuilla to the east, the Cupeño and Ipai to the south. Reference **Figure 4.6-6**, ***Ethnographic Location of Study Area***. With the exception of the Ipai, these tribes shared

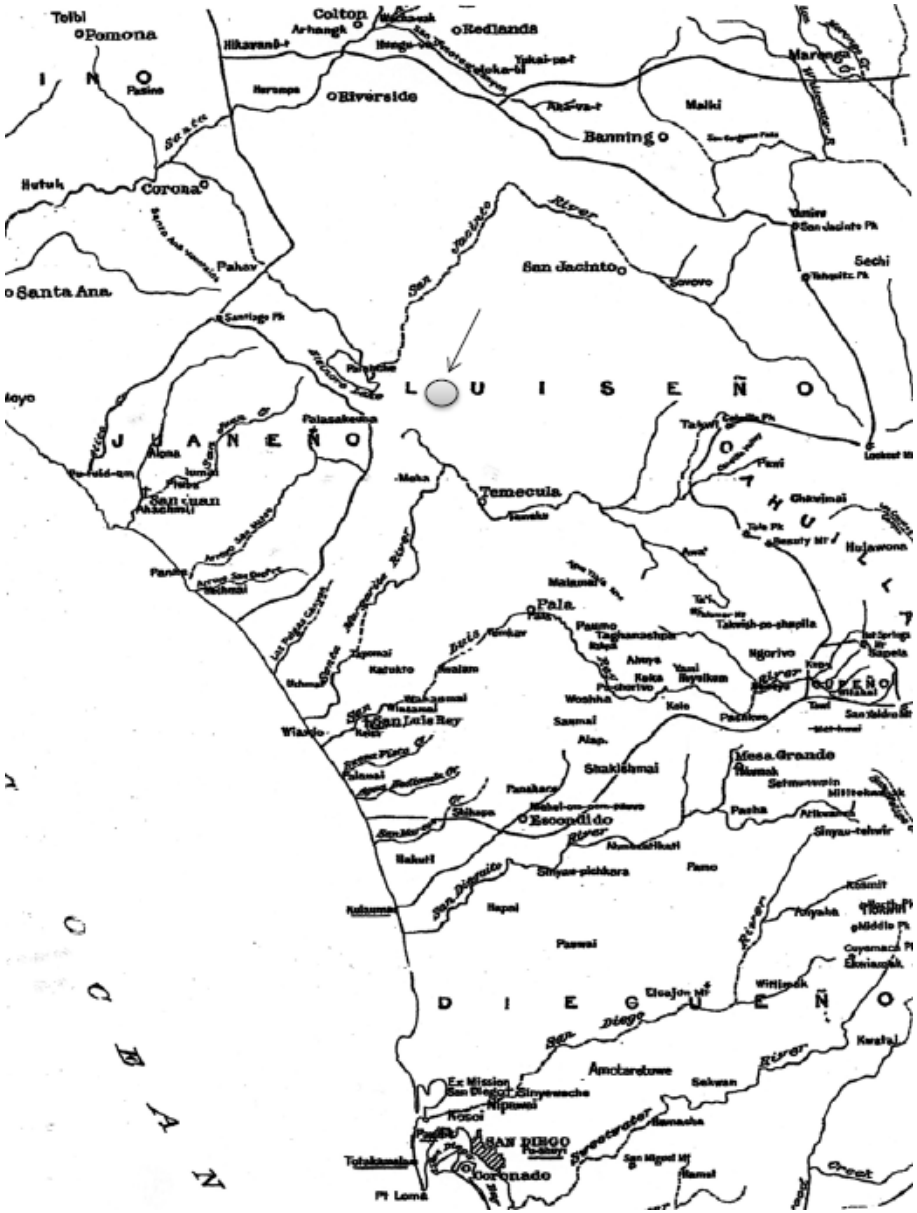
similar cultural and language traditions. Although the social structure and philosophy of the Luiseño were similar to that of neighboring tribes, they had a greater population density and correspondingly, a more rigid social structure.

The settlement pattern of the Luiseño was based on the establishment and occupation of sedentary autonomous village groups. Villages were usually situated near adequate sources of food and water, in defensive locations primarily found in sheltered coves and canyons. Typically, a village was comprised of permanent houses, a sweathouse, and a religious edifice. The permanent houses of the Luiseño were earth-covered and built over a two-foot excavation. According to informants' accounts, the dwellings were conical roofs resting on a few logs leaning together, with a smoke hole in the middle of the roof and entrance through a door. Cooking was done outside when possible, on a central interior hearth when necessary. The sweathouse was similar to the houses except that it was smaller, elliptical, and had a door in one of the long sides. Heat was produced directly by a wood fire. Finally, the religious edifice was usually just a round fence of brush with a main entrance for viewing by the spectators and several narrow openings for entry by the ceremonial dancers.

Luiseño subsistence was based on seasonal floral and faunal resource procurement. Each village had specific resource procurement territories, most of which were within one day's travel of the village. During the autumn of each year, however, most of the village population would migrate to the mountain oak groves and camp for several weeks to harvest the acorn crop, hunt, and collect local resources not available near the village. Hunters typically employed traps, nets, throwing sticks, snares, or clubs for procuring small animals, while larger animals were usually ambushed, then shot with bow and arrow. The Luiseño normally hunted antelope and jackrabbits in the autumn by means of communal drives, although individual hunters also used bow and arrow to hunt jackrabbits throughout the year. Many other animals were available to the Luiseño during various times of the year but were generally not eaten. These included dog, coyote, bear, tree squirrel, dove, pigeon, mud hen, eagle, buzzard, raven, lizards, frogs, and turtles.

Small game was prepared by broiling it on coals. Venison and rabbit were either broiled on coals or cooked in and earthen oven. Whatever meat was not immediately consumed was crushed on a mortar, then dried and stored for future use. Of all the food sources utilized by the Luiseño, acorns were by far the most important. Six species were collected in great quantities during the autumn of every year, although some were favored more than others. In order of preference, they were black oak, coast live oak, canyon live oak, Engelmann Oak, interior live oak, and scrub oak. The latter three were used only when others were not available. Acorns were prepared for consumption by crushing them in a stone mortar and leaching off the tannic acid, then made into either a mush or dried to a flour-like material for future use.

FIGURE 4.6-6
ETHNOGRAPHIC LOCATION OF STUDY AREA



Source: CRA Report (**Appendix E**)

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Herb and grass seeds were used almost as extensively as acorns. Many plants produce edible seeds which were collected between April and November. Important seeds included, but were not limited to, the following: California sagebrush, wild tarragon, white tidy tips, sunflower, calabazilla, sage, California buckwheat, peppergrass, and chamise. Seeds were parched, ground, cooked as mush, or used as flavoring in other foods.

Fruit, berries, corms, tubers and fresh herbage were collected and often immediately consumed during the spring and summer months. Among those plants commonly used were basketweed, Manzanita, miner's lettuce, thimbleberry, and California blackberry. When an occasional large yield occurred, some berries, particularly juniper and manzanita, were dried and made into a mush at a later time.

Tools for food acquisition, preparation, and storage were made from widely available materials. Hunting was done with a bow and fire-hardened or stone-tipped arrows. Coiled and twined baskets were used in food gathering, preparation, serving, and storage. Seeds were ground with hand-stones on shallow granitic mutates, while stone mortars and pestles were used to pound acorns, nuts, and berries. Food was cooked in clay vessels over fireplaces or earthen ovens. The Luiseño employed a wide variety of other utensils produced from locally available geological, floral, and faunal resources in all phases of food acquisition and preparation.

The Luiseño subsistence system described above constitutes seasonal resource exploitation within their prescribed village-centered procurement territory. In essence, this cycle of seasonal exploitation was at the core of all Luiseño lifeways. During the spring collection of roots, tubers, and greens was emphasized, while seed collecting and processing during the summer months shifted this emphasis. The collection areas and personnel (primarily small groups of women) involved in these activities remained virtually unchanged. However, as the autumn acorn harvest approached, the settlement pattern of the Luiseño altered completely. Small groups joined to form the larger groups necessary for the harvest and village members left the villages for the mountain oak groves for several weeks. Upon completion of the annual harvest, village activities centered on the preparation of collected foods for use during the winter. Since few plant food resources were available for collection during the winter, this time was generally spent repairing and manufacturing tools and necessary implements in preparation for the coming resource procurement seasons.

Each Luiseño village was a clan tribelet – a group of people patrilineally related who owned an area in common and who were both politically and economically autonomous from neighboring villages. The chief of each village inherited his position and was responsible, with the help of an assistant, for the administration of religious, economic, and warfare powers. A council comprised of ritual specialists and shamans, also hereditary positions, advised the chief on matters concerning the environment, rituals, and supernatural powers.

The social structure of the villages is obscure, since the Luiseño apparently did not practice the organizational system of exogamous moieties used by many of the surrounding Native American groups. At birth, a baby was confirmed into the house-holding group and patrilineage. Girls and boys went through numerous puberty initiation rituals during which they learned about the supernatural beings governing them and punishing any infractions of the rules of behavior and ritual. The boys' ceremonies including the drinking of toloache, visions, dancing, ordeals, and

the teaching of songs and rituals. Girls' ceremonies included advice and instruction in the necessary knowledge for married life, "roasting" in warm sands, and rock painting. Shortly after the completion of the puberty initiation rituals, girls were married, typically to someone arranged for by the girl's parents. Although the Luiseño were concerned that marriages not occur between individuals too closely related, it has been suggested that cross- cousin marriages were the norm prior to Spanish Catholic influences beginning in 1769. Luiseño marriages created important economic and social alliances between lineages and were celebrated accordingly with elaborate ceremonies and a bride price. Residence was typically patrilineal and polygyny, often sororal, was practiced especially by chiefs and shamans.

One of the most important elements in the Luiseño life cycle was death. At least a dozen successive mourning ceremonies were held following an individual's death, with feasting taking place and gifts being distributed to ceremony guests. Luiseño cosmology was based on a dying-god theme, the focus of which was *Wiyó-t',* a creator-culture hero and teacher who was the son of earth-mother. The order of the world was established by this entity and he was one of the first "people" or creations. Upon the death of *Wiyó-t'* the nature of the universe changed, and the existing world of plants, animals, and humans was created. The original creations took on the various life forms now existing and worked out solutions for living. These solutions included a spatial organization of species for living space and a chain-of-being concept that placed each species into a mutually beneficial relationship with all others.

Based on Luiseño settlement and subsistence patterns, the type of archaeological sites associated with this culture may be expected to represent the various activities involved in seasonal resource exploitation. Temporary campsites usually evidenced by lithic debris and/or milling features, may be expected to occur relatively frequently. Food processing stations, often only single milling features, are perhaps the most abundant type of site found. Isolated artifacts occur with approximately the same frequency as food processing stations. The most infrequently occurring archaeological site is the village site. Sites of this type are usually large, in defensive locations amidst abundant natural resources, and usually surrounded by the types of sites previously discussed, which reflect the daily activity of the villagers. Little is known of ceremonial sites, although the ceremonies themselves are discussed frequently in the ethnographic literature. It may be assumed that such sites would be found in association with village sites, but with what frequency is not known.

4.6.2.2.c History

Four principle periods of historical occupation existed in Southern California: the Explorer Period (A.D. 1540-1768), the Colonial Spanish-Mission Period (A.D. 1769-1830), the Mexican Ranch-Pastoral/Landless Indian Period (A.D. 1830-1860), and the American Developmental/Indian Reservation Period (A.D. 1860-present).

In the general Project area, the Colonial Spanish-Mission Period (A.D. 1769-1830) first represents historical occupation. Although earlier European explorers had traveled throughout South California, it was not until the 1769 "Sacred Expedition" of Captain Gaspar dé Portola and Franciscan Father Junipero Serra that there was actual contact with aboriginal inhabitants of the region. The intent of the expedition, which began in San Blas, Baja California, was to establish missions and presidios along the California coast, thereby serving the dual purpose of converting

Indians to Christianity and expanding Spain's military presence in the "New World." In addition, each mission became a commercial enterprise utilizing Indian labor to produce commodities such as wheat, hides, and tallow that could be exported to Spain. Founded on July 16, 1769, the Mission San Diego de Alcalá was the first of the missions, while the Mission San Francisco Solana was the last mission, founded on July 4, 1823.

In 1798 the Mission San Luis Rey de Francia was founded and all aboriginals living within the mission's realm of influence became known as the "Luiseño." Within a 20-year period, under the guidance of Fr. Antonio Peyri, the mission prospered to a degree that it was often referred to as the "King of the Missions." At its peak, the Mission San Luis Rey de Francia, which is located in what is now Oceanside, controlled six ranches and annually produced 27,000 cattle, 26,000 sheep, 1300 goats, 500 pigs, 1900 horses, and 67,000 bushels of grain. During this period, the Mission San Luis Rey de Francia claimed the entire region that is now western Riverside County and northern San Diego County as a cattle ranch, although records of the Mission San Juan Capistrano show this region as part of their holdings.

Toward the end of this period, a federal law was passed that would have a substantial future impact on the study area in that it encouraged both increased settlement and land speculation. The Land Act of 1820, enacted April 24, 1820, ended the ability to purchase the United States' public domain lands on a credit or installment system over four years, as previously established. The new law became effective July 1, 1820 and required full payment at the time of purchase and registration. But to encourage more sales and make land more affordable, Congress also reduced both the minimum price from $2.00 to $1.25 per acre and the minimum size of a standard tract from 160 to 80 acres. The minimum full payment now amounted to $100, rather than $320. At the time, these lands were located on the frontier within the Congress Lands of Ohio and elsewhere in the Northwest Territory and Missouri Territory, in what was then "The West." The Land Act later applied to lands all the way to California as the boundaries of the West expanded.

With the high cost of transporting their produce and lack of internal improvements, the law was considered necessary because many farmers were having trouble paying off loans due to the additional economic hardships brought by the Panic of 1819. The previous Land Act of 1804 still included a minimum purchase (160 acres) too large for many individuals, and the price that was established by the Land Act of 1785. This was too expensive for the average family moving west. Squatters were breaking the laws by trying to get land more cheaply by moving onto the land before it was acquired by the government and put up for auction. By lowering the price of land and the amount of land required for purchase, the law made it possible for settlers to move to the West, thus increasing the population and decreasing the need for illegal occupation. Although the Land Act of 1820 was good for the average American, it was also good for the wealthy land speculators who had sufficient money to buy the lower cost land, hoping to sell it later at a higher price. Although the Land Act helped create a new age of Western growth and influence, it also increased the confiscation of land from Native Americans.

During the Mexican Ranch-Pastoral/Landless Indian period (A.D. 1830-1860) the first of the Mexican ranchos were established following the enactment of the Secularization Act of 1833 by the Mexican government. Mexican governors were empowered to grant vacant land to contractors (*empresarios*), families, or private citizens (whether Mexican or foreigners) who may

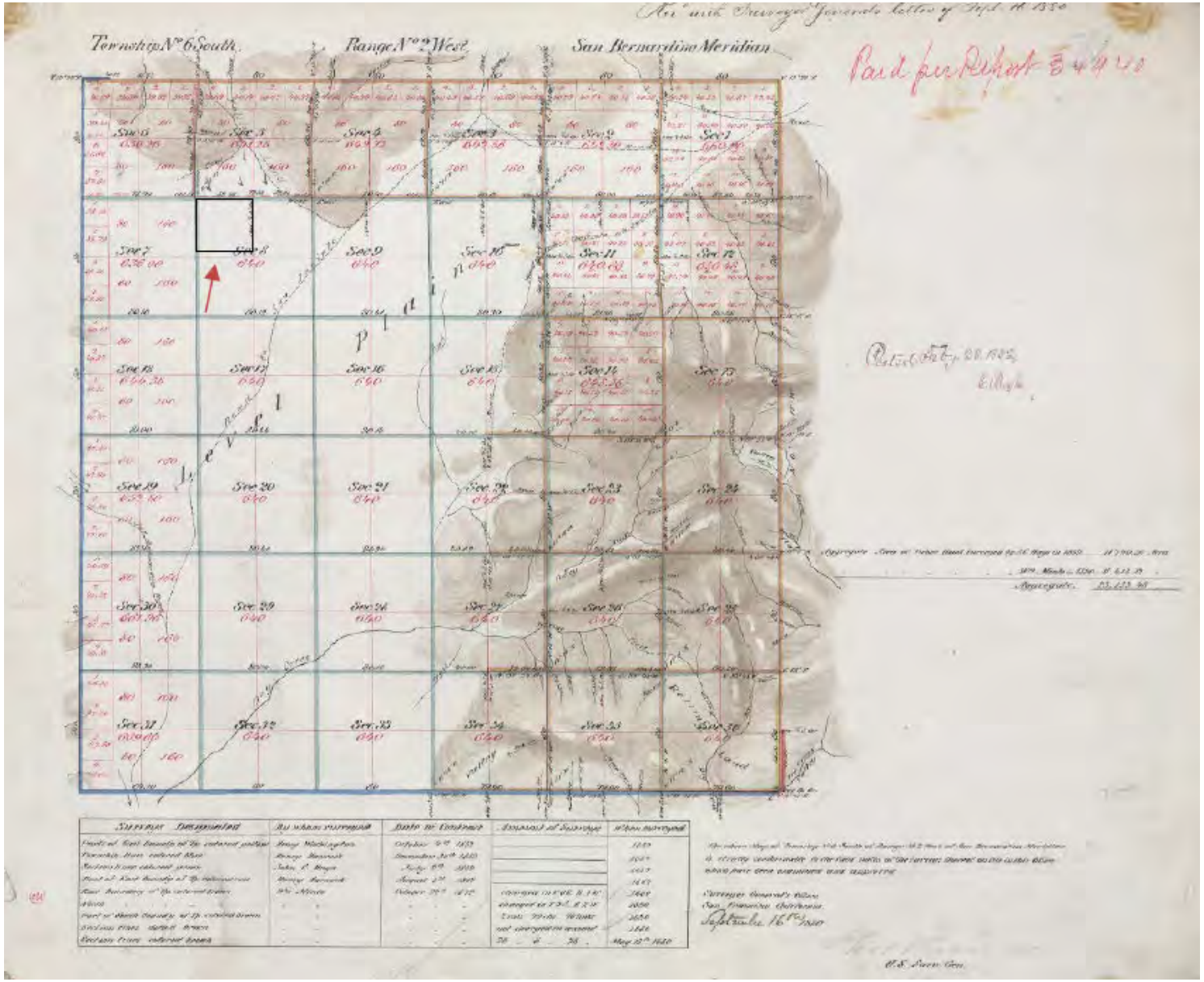
ask for it for the purpose of cultivating or inhabiting it. Mexican governors granted approximately 500 ranchos during this period. Although legally a land grant could not exceed 11 square leagues (about 50,000 acres or 76 square miles) and absentee ownership was officially forbidden, neither edict was rigorously enforced. Although the Project site is not located within any of the ranchos, it was approximately 4.0 miles southwest of the San Jacinto Viejo Rancho, so activities occurring on the Rancho probably had at least an indirect impact on the Project area.

The first use of the name San Jacinto Rancho was for a Mission San Luis Rey cattle ranch that had been named for the Silesian-born Dominican Saint Hyacinth (Jacinto is Spanish for Hyacinth), although there is no record of exactly when the Mission established the ranch. The ranch was claimed by the Mission San Juan Capistrano as well but remained in the possession of the Mission San Luis Rey. On August 9, 1842, José Antonio Estudillo, who had been *mayordomo* of the Mission San Luis Rey from 1840 to 1843, filed an application for a grant of the four -square leagues of the San Jacinto Rancho. Estudillo's petition stated that the land was absolutely vacant and that the land contained only an "indifferent house covered with earth, ten varas in length and of a corresponding width, which however is in a ruinous condition, and also an old corral which is useless, all constructed by the Indians, who sometimes live there, at which times they also make some small gardens". Mexican authorities investigated Estudillo's claim and determined that the land was indeed vacant and had been so for a long time, with only "three Christianized Indians living on said place," all of whom were reportedly desirous of Estudillo taking over the land. Although two other Individuals had previously petitioned for the ranch, Governor pro-tem Manuel Jimeno, apparently in consideration of Estudillo's work for the Mexican government as mayordomo of San Luis Rey, granted eight square leagues of the San Jacinto Rancho to Estudillo on December 21, 1842, an amount of land twice the size of what Estudillo had requested.

Such a large grant may have overwhelmed Estudillo because in 1845 Estudillo's son-in-law, Miguel de Pedrorena, petitioned for the grant of surplus land from the San Jacinto Rancho. Pedrorena's petition showed the original eight-league grant cut in half with Estudillo's portion to the southeast labeled "San Jacinto Viejo" (Old San Jacinto) and Pedrorena's portion in the northwest named "San Jacinto Nuevo" (New San Jacinto). Pedrorena also requested a small area north of San Jacinto in the Badlands. When submitted to the governor, Pedrorena's entire petition was called the San Jacinto Nuevo y Potrero, which essentially means "surplus lands of the old San Jacinto Rancho.

It was also during this period of history that the California Gold Rush occurred. During the years of the gold rush most mining occurred in the northern and central portions of the state. As a result, these areas were far more populated than most of southern California. Nevertheless, there was an increasing demand for land throughout the state and the federal government was forced to address the issue of how much land in California would be declared public land for sale. The Congressional Act of 1851 created a land commission to receive petitions from private land claimants and to determine the validity of their claims. The United States Land Survey of California conducted by the General Land Office (GLO), also began that year. Since the Project site was considered public land, it was included in the GLO surveys beginning in 1852 and continuing through the 1880s. Reference **Figure 4.6-7**, ***Property Location following 1852 to 1880 General Land Office Survey***, below.

FIGURE 4.6-7
PROPERTY LOCATION FOLLOWING 1852 TO 1880 GENERAL LAND OFFICE SURVEY



Source: CRA Report (**Appendix E**)

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In the final period of historical occupation, the American Developmental/Landless Indian Reservation Period (A.D. 1860-present), the first major changes in the study area took place as a result of land issues addressed in the previous decade. Following completion of the GLO surveys, large tracts of federal land became available for sale and for preemption purposes, particularly after Congress passed the Homestead Act of 1862. California was eventually granted 500,000 acres of land by the federal government for distribution, as well as two sections of land in each township for school purposes. Much of this land was located in the southern portion of the state. Under the Homestead Act of 1862, 160-acre homesteads were available to citizens of the United States (or those who had filed an intention to become one) who were either the head-of-household or a single person over the age of 21 (including women). Once the homestead claim was filed the applicant had six months to move onto the land and was required to maintain residency for five years as well as to build a dwelling and raise crops. Upon completion of these requirements the homesteader had to publish intent to close on the property to allow others to dispute the claim. If no one did so the homesteader was issued a patent to the property, thus conveying ownership. Individuals were attracted to the federal lands by their low prices and as a result, the population began to increase in regions where the lands available for homestead were located. It was at this time that the region of Southern California which became Riverside County saw an influx of settlers as well as those seeking other opportunities, including gold mining and land speculation, the latter being the result of application of the Land Act of 1820 to California. As Anglo-Americans came to this region in increasing numbers, the continued existence of Native Americans in the area was threatened as their traditional lands were taken from them.

On March 17, 1882, the California Southern Railroad commenced service, extending from National City near the Mexican border in San Diego County, northerly to Temecula and Murrieta, across the Perris Valley, down the Box Springs Grade, and on to the City of San Bernardino. Under the supervision of chief engineer Frederick Thomas Perris, the railway had been completed through the Perris Valley early in 1882 and settlers rushed to the region to homestead and buy railroad land. The original rail station in this area was the town of Pinacate, located approximately two miles south of the present City of Perris. Unfortunately, from the time the first train came through Temecula on its way to from National City to San Bernardino, the California Southern Railroad had been plagued by flooding and washouts in Temecula Canyon. Railway service was disrupted for months at a time and a fortune was spent on rebuilding the washed- out tracks. Finally, in 1891 the Santa Fe Railroad constructed a new line from Los Angeles to San Diego down the coast and when later that year the California Southern Railway's route through Temecula Canyon once again washed out, that portion of the line was discontinued.

Around the time that the California Southern Railroad commenced service, Mr. L. Menifee Wilson, a 20-year-old from Kentucky, moved to the area and located what appears to have been the first gold quartz mine in Southern California. The mine was located approximately three miles west of the Residential Project site and was named the Menifee Quartz Lode. As news of his find spread, miners flocked to the region to try their luck. Hundreds of gold mining claims were subsequently filed in the region around Menifee's mine and this area became known as Menifee and the Menifee Valley. In addition to the Menifee Mine, three other gold mines were located in the vicinity of the Residential Project site; Twin Buttes I & Twin Buttes II were both located one mile to the north and the Leon Mine was located one mile to the southwest. The Leon Mine was

apparently named after the Leon Post Office, established on May 4, 1888 on the southwest corner of what is now Scott Road and Briggs Road. Not much is known about this post office except that its postmaster was Emil Leon Plath and that the post office was in his house. Plath homesteaded 160 acres southwest of the intersection of Scott and Briggs Road early enough to have received authorization for the post office yet did not receive a patent until July 20, 1892. He apparently moved before the excitement of Leon Mine in 1894, so he obviously did not have any connection to the mine itself. After Plath left the area, the Leon Post Office moved several times, until it was finally discontinued on July 21, 1911.

The locally-famous Leon Mine was actually the second Leon Mine, the first having been discovered by John McCool and Arthur S. Auchincloss on January 27, 1892, about one mile southwest of the Leon post office. While the first was not destined to provide riches and ultimately faded into obscurity, the second Leon Mine was located within one-half mile of the post office and yielded an abundance of gold beginning with its discovery on February 26, 1894 by J. Watts Briggs. Briggs was soon joined by his brother, Charles H. Briggs, in developing the mine. Together they erected a roller mill, excavated a tunnel 300-feet into the hillside, with a perpendicular shaft down 130 feet, and constructed a boarding house and blacksmith shop. In September of 1895 the Leon Gold Mining Company became a corporation for the business of buying, selling, and developing mining properties. Leon Road was named for the post office and the mine, while Briggs Road was named for J. Watts Briggs.

Numerous gold quartz discoveries in the Menifee, Winchester, Perris, Murrieta, and Wildomar areas further fueled the belief that the entire region was one of unsurpassed mineral wealth, ripe for the taking. Wilson was one of the major proponents of this belief and in addition to his original mine, claimed several others in the general area. From the time of L. Menifee Wilson's first gold discovery in the early 1880's, gold production through hard rock mining in western Riverside County increased considerably, reaching its peak in 1895. At that time, the value of the gold being produced was reported in the *Mining and Scientific Press* as being $285,106. Although the gold value was still relatively high in 1896 ($262,800), from that point on production decreased substantially every year until in 1917 the value of gold was reported as being zero.

Based on numerous reports found in local newspapers such as the *Winchester Record*, *Perris New Era*, and Riverside's *Press and Horticulturist*, the gold boom in western Riverside County was rather short-lived, occurring primarily between late 1893 and mid-1895. During this period, there were almost daily articles enthusiastically touting the number of new mining claims being recorded, yields from the various operations, and the resultant population boom as news of the region's mineral wealth spread. By early 1896 the mining related articles were less frequent and often lamented the closing of mines, which was generally due to the lack of water necessary for processing gold-bearing ore. By this time a far greater emphasis began to be placed on the agricultural potential of the area. Replacing daily reports on gold yields from the mines were crop yields and bushel reports from the growing number of farms in western Riverside County. Although settlers continued to move into this region and a number of small towns developed, the migration was less dynamic than it had been during the early years of the gold rush and the region retained a fairly rural flavor until the last decades of the 20th century.

The Project site is located near the community of Winchester, which was founded in 1886. This area was originally known as Pleasant Valley, tracing its roots to the 1879 arrival of the first

known non-Native settlers in the area, Robert Kirkpatrick and his four sons from Tennessee. Shortly thereafter, Swiss emigrants Angelo Domenigoni and Gaudenzio Garboni began ranching south of the community and Pleasant Valley began to expand as word spread of its attractive attributes. The community was also known as Rockhouse, named for Angelo Domenigoni's rock house in which a post office had been established in 1880. The town itself was named for Mrs. Amy Winchester, about whom nothing is known except that she was the widow of Horace Winchester and that on various deeds between 1888 and 1891 her address was listed variously as Colton, Ontario, San Diego County, and San Bernardino County. On May 22, 1886 Mrs. Winchester and Dennis O'Leary purchased 320 acres of land located in the eastern half of Section 28, Township 5 south, Range 2 west that was eventually to become Winchester. One month later, the Rev. J.G. Miller, Dennis O'Leary, Amy Winchester, and Elizabeth Rice acquired Section 27 from the Southern Pacific Railroad. Although these four-people contemplated platting a new townsite on the 960 acres they had acquired, nothing was actually done. Later that year, on October 7, 1886, William Josiah Waterhouse deeded the west half of Section 28 to Mr. G.M. Adams. Adams and his partner, T.J. Stuart, planned on developing a townsite immediately, filing a map entitled "Stuart and Adam Subdivision of the West ½ of Section 28, T5s, R2w" on November 8, 1886. This map subdivided the 320 acres into eight forty-acre parcels, dedicated a railroad right-of-way through its northern half, and had a main east-west street through its center that was named Winchester Avenue.

The actual town of Winchester appears to have had its beginning during the summer of 1887 when Miller, O'Leary, Rice, and Winchester hired surveyor T.M. Parsons to draw a map of a townsite to be called Winchester. The new town encompassed 280 acres, of which 160 acres were divided into forty-six blocks of town lots generally measuring either 25' or 50' wide by 142' deep. The remaining acreage was divided into twenty-four "villa lots" of five acres, all of which were located southwest of town. The east-west streets were named for early land purchasers/investors, while the north-south streets were named for presidents. The northernmost boundary of town, the section line between Sections 27 and 28, was designated for a railroad right-of-way, complete with depot grounds.

The sale of land in the new town of Winchester began when the map was filed on January 3, 1888. Beginning in September 1887, however, O'Leary had already sold the land designated for a railroad to the California Central Railroad and sold large groups of lots to Mrs. Rice and others. Winchester apparently was founded as a "temperance" town where no alcoholic beverages of any type were to be sold. All of the deeds, including the one to the California Central Railroad, included an anti-liquor clause which automatically deeded the parcel or parcels back to the grantor (usually Rev. Miller) if it was used for "vending of intoxicating liquors for drinking purposes". Further, the intent of Winchester founders Rev. Miller, Amy Winchester, Dennis O'Leary, and Elizabeth Rice was to provide a colony where like-minded Methodists could gather. The fact that the Winchester Methodist Episcopal Church was built in 1886 at a cost of $2000, well before the actual town was established, speaks to the influence the Methodist Church had in the development of the town.

Both the townsite plat and the Adams/Stuart subdivision allowed for land to be set aside for an expected railroad branch line from Perris to San Jacinto. As anticipated, construction began in 1887 on the branch rail line from Perris to San Jacinto under the charter of the Perris & San Jacinto Railway and the line commenced operation on May 20, 1888. In 1890, the railroad depot was

finally built and Tilla Patterson, daughter of early settler John Patterson, was named the Winchester station master, a position she would hold until 1929-30 when the depot closed at the behest of the railroad. By 1890, the town of Winchester had a population of 200 that was served by the Methodist church, a brick business block, two warehouses, a hotel, store, blacksmith shop, tin shop, feed stable, wagon shop, and two physicians. Winchester became known as an important shipping center for wheat and barley, with over 200,000 sacks of grain shipped in 1889 alone. Despite the anticipated future growth and success of Winchester, by 1891, Amy Winchester had divested her land holdings in and around Winchester and moved out of the area. During the early 1890s, some Winchester residents began to discuss irrigating lands in the Pleasant Valley area instead of depending on simple dry-farming and livestock. They believed that the crop diversification permitted by irrigation would improve their existence and standard of living. At that time, wells provided an adequate supply of water for residents and their livestock, but not enough for large scale farming. Unfortunately, a good, sufficient supply of water was several miles away in the San Jacinto Mountains, but this problem did not seem insurmountable. Backers of a new irrigation district in Winchester joined with leaders in San Jacinto and on August 3, 1891, the San Jacinto and Pleasant Valley Irrigation District was formed. The new water district's task was to bring water from the San Jacinto Mountains to Winchester and San Jacinto, but the problem was that most of the water was already claimed so they were forced to purchase existing claims. Over the next few years they purchased existing water systems in San Jacinto and those of the Fairview Land and Water Company.

The prospect of having irrigation water made residents of the regions to be served downright giddy, especially in Winchester, and construction started almost immediately on ditches and flumes that would carry the water. Residents dreamed of orange groves, packing houses, and a city that would rival Riverside. By the summer of 1893, water had finally arrived in Winchester and the residents believed that their dreams would certainly now come true. Unfortunately, this was not to be the case. Not only was the water supply inadequate, but the canals had been dug into the dirt, with no concrete or rock lining, and as a result, a tremendous amount of water was lost to percolation, evaporation, and rodent burrowing. Further, the 1894 drought that devastated Southern California further eroded the amount of water available for irrigation.

By 1899, the San Jacinto and Pleasant Valley Irrigation District was no more, with the Riverside County Superior Court declaring that the district had been created illegally. Without irrigation water Winchester depended once again on dry-farmed grain and livestock raising. Good access to the railroad allowed the town to experience some success, particularly since it was surrounded by thousands of acres of land ideal for grain and livestock production. Although by the early 1900s Winchester had declined to the point of almost resembling a ghost town, by the latter half of the 20th century, the area gradually recovered and developed into a small rural town that serves the needs of farmers and ranchers of the region.

4.6.2.3 Regulatory Setting

4.6.2.3.a Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) authorized the National Register of Historic Places and coordinates public and private efforts to identify, evaluate, and protect the nation's historical and archaeological resources. The National Register includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review refers to the federal review process designed to ensure that historical properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process, with assistance from state historic preservation offices.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

4.6.2.3.b State

California Public Resources Code

Archaeological, paleontological, and historical sites are protected by a wide variety of state policies and regulations under the California Public Resources Code. In addition, cultural and paleontological resources are recognized as nonrenewable and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code (Pub. Res. Code §§ 5020–5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- Pub. Res. Code §§ 5079–5079.65 defines the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federally and state-mandated historical preservation programs in California and the California Heritage Fund.
- Pub. Res. Code §§ 5097.9–5097.991 provides protection to Native American historical and cultural resources and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.
- Pub. Res. Code § 5097.98 states that "in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation...until the coroner...has determined...that the remains are not subject to...provisions of law concerning investigation of the circumstances, manner and cause of

any death, and the recommendations concerning the treatment and disposition of the human remains has been made to the person responsible. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and he or she has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission." This is reflected in **Standard Condition SC-CUL-1** (as outlined in Section 4.6.5).

CEQA Guidelines Section 15064.5(a)(1)-(3)

CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency. Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "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." A resource may be listed in the California Register if it meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. 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.
4. Has yielded, or may be likely to yield, information important in prehistory or history. (Pub. Res. Code §5024.1(c))

4.6.2.3.c Local

Riverside County General Plan

The following are the applicable Plan Goals and Policies from the General Plan Multipurpose Open Space Element:

- **Policy OS 19.1** Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside.
- **Policy OS 19.2** The County of Riverside shall establish a Cultural Resources Program in consultation with Tribes and the professional cultural resources consulting community that, at a minimum would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; curation and the descendant community consultation requirements of local, state

and federal law.

- **Policy OS 19.3** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.
- **Policy OS 19.5** Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

Sun City / Menifee Valley Area Plan

- **Policy SCMVAP 12.1** Protect the Sun City/Menifee Valley's historical, archaeological, cultural, and paleontological resources through adherence to applicable policies found within the Cultural Resources and Paleontological Resources sections of the General Plan Multipurpose Open Space Element.

4.6.3 Thresholds of Significance

As discussed in Section 4.6.1, Project impacts to four (4) criteria pertaining to cultural resources will be analyzed. According to the IS, the Project would have a significant impact if it would:

8. Historic Resources.
   a. Alter or destroy an historic site?
   b. Cause a substantial adverse change in the significance of a historical resource pursuant California Code of Regulations, Section 15064.5?

9. Archaeological Resources.
   a. Alter or destroy an archaeological site
   b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?

It should be noted that Threshold 9.d, from the IS, which asked "Would the Project restrict existing religious or sacred uses within the potential impact area?" was deleted as part of the changes to Appendix G and will not be analyzed below.

The questions posed in the IS are included for this topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential cultural resources changes in the environment are addressed in response to the above threshold in the following analysis.

4.6.4 Potential Impacts

THRESHOLD 8.a: Would the Project alter or destroy an historic site?

No Impact

Please reference the detailed discussion in 8.b, below.

No cultural resources of prehistoric or historic origin were observed within the boundaries of the

Residential Project site or the Off-site Project components. Therefore, the Project will not alter or destroy an historic site. No impacts will occur.

THRESHOLD 8.b: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact

Methods and Procedures

Research

Prior to commencement of the Cultural Resources Assessment (*CRA*) field survey, a records search was conducted by staff at the Eastern Information Center located at the University of California, Riverside. The research included a review of all site maps, site records, survey reports, and mitigation reports relevant to the study area. The following documents were also reviewed: National Register of Historic Places, California Office of Historic Preservation Archaeological Determinations of Eligibility, and California Office of Historic Preservation Historic Properties Directory. In addition to the records search, a request for a Sacred Lands File search was submitted to the Native American Heritage Commission and Project scoping letters were sent to thirteen tribal representatives listed as being interested in project development within the County.

Following the records and Sacred Lands File searches, a literature search of available published references to the study area was undertaken. Reference material included all available photographs, maps, books, journals, historical newspapers, registers, and directories at the Riverside Public Library Local History Collection, and the University of California, Riverside libraries. Archival and cartographic research was conducted through the USGS Historical Map Collection, GLO records currently maintained by the California Office of the Bureau of Land Management, and documents containing census and other information held by Ancestry.com. The following maps were consulted:

1852 thru 1880 GLO Plats, Township No. 6 South, Range No. 2 West;
1852 thru 1880 GLO Plats, Township No. 6 south, Range No. 3 West;
1901 Elsinore, California 30' USGS Topographic Map;
1942 Murrieta, California 15' U.S. Dept. of the Army Corps of Engineers Topo Map;
1953 Romoland, California 7.5' USGS Topographic Map;
1953 Winchester, California 7.5' USGS Topographic Map;
1959 Santa Ana, California 1:250,000 USGS Topographic Map;
1973 (photorevised) Romoland, California 7.5' USGS Topographic Map;
1973 (photorevised) Winchester, California 7.5' USGS Topographic Map;
1979 (photorevised) Romoland, California 7.5' USGS Topographic Map;
1979 (photorevised) Winchester, California 7.5' USGS Topographic Map; and
1980 (photorevised) Santa Ana, California 1:250,000 USGS Topographic Map.

Fieldwork

Subsequent to the literature, archival, and cartographic research, the Cultural Resources Consultant conducted comprehensive on-foot field surveys of the Project site on November 6, 9, 10 and December 7, 8, 2017. The November surveys included only the land encompassed by the Residential Project site. Because the property had recently been plowed and was lying fallow and the western half was planted in a potato crop, the field methodology necessarily differed. Beginning at the southeastern corner of the eastern half of the property, the survey was accomplished by traversing the land in parallel transects at 15-meter intervals. The survey proceeded in a generally south-north, north- south direction following the existing land contours. All of the property was accessible for survey with ground surface visibility of 100%.

Beginning at the southeastern corner of the western half of the Residential Project site, the field survey was accomplished by walking in the furrows between rows of potatoes. The survey commenced in a south-north, north-south direction following the crop rows, with parallel transects spaced at five- row intervals. Although the density of the above-ground potato plants was such that it was not possible to see the ground of the individual rows, the furrows between rows were clear and offered 100% ground surface visibility. This portion of the property was revisited during the December field surveys as by then the potato crop had been harvested and the ground surface visibility had improved markedly to an overall average of approximately 75%.

The Off-site Project components were surveyed in December so that by then, any crops on land slated for the storm drain channel had been harvested. With the exception of the channel land, a portion of Tres Lagos that has not been improved, and the area slated for the sewer lift station, all the off-site improvements follow the existing roadways of Tres Lagos, Holland Road, Craig Avenue, Leon Road, Briggs Road, and Eucalyptus Avenue. Since Leon Road, Briggs Road, and a portion of Tres Lagos are paved, the surveys included only the rights- of-way on either side of each road. With one transect down the middle of each right-of way, the surveys of Briggs Road and Leon Road commenced at the southeast corner of each, continued northward until reaching the terminus of the proposed off-site improvement area, then crossed to the western road right-or-way and continued in a southward direction until reaching the end of the proposed improvement. The same method was employed for Tres Lagos, except that the survey proceeded in a west-east, east-west direction, following the existing road rights-of-way. Holland Road, Craig Avenue, and Eucalyptus Avenue are unpaved, as is the eastern section of Tres Lagos, so the surveys of each included the entire road and rights-of-way on both sides. Holland Road and Craig Avenue run in an east-west direction so the survey of each road began at the northeastern corner of the right-of-way, continued in a westerly direction until reaching the end of the designated improvement area, moved to the middle of the road and continued east until reaching the easternmost limit, then turned to the southern right-of-way and continue west until reaching the end of the improvement area. The survey method for Eucalyptus Avenue was the same, except it followed a south-north, north-south direction. Survey transects of the proposed storm drain channel and unimproved portion of Tres Lagos each began at the southeastern boundary and proceeded in a westerly direction until reaching the end of the improvement limit. Since virtually all of the land on which the lift station will be built is either paved or under water, the survey was limited to the few areas that were still clear, so parallel transects at regular intervals were not possible.

Results

Results of the records search conducted by staff at the Eastern Information Center indicated that the land encompassed by Tentative Tract No. 37439 had not been included in any previous cultural resources studies. However, all of the Off-site Project components (sewer line, water line, storm drain channel, sewer lift station) have been included in nine previous cultural resources studies, with no cultural resources observed during any of the associated field surveys. Maps showing the locations of each previous cultural resources assessment are found in the confidential appendix submitted to the Riverside County Archaeologist.

The Residential Project site is in a very well-studied area. Fifty-six cultural resource studies have been conducted within a one-mile radius, the majority encompassing large tracts of land; one study alone covered 2,900 acres. As a result, virtually all land within this radius has been involved in at least one study except the Project site. During the course of the field surveys for these studies, 42 cultural resources properties have been recorded, 36 of which are contained within one archaeological district. Reference Table 1, *Previously Recorded Cultural Resources Near TTM 37439,* in the *CSA***.** All but four of the recorded cultural resources properties are of prehistoric origin (i.e. Native American), although historic-period resources have been found intermingled with prehistoric resources at two sites.

Prehistoric Resources

The vast majority of prehistoric archaeological sites are comprised exclusively or predominantly of bedrock milling features associated with the food processing activities of indigenous people of the region. The most common milling features are slicks, typically used with manos to grind locally-available seeds and grasses. Such sites are ubiquitous to Riverside County and are generally interpreted as sites used occasionally by individuals or small groups of Native peoples on resource-gathering excursions. Past studies of these sites generally found little or no subsurface cultural remains associated with the milling features. This is consistent with the majority of milling sites recorded within one mile of the Project site, but there are four clear exceptions. These sites contain not only bedrock milling features, but a variety of flaked and ground stone tools, bone, pottery, and midden, indicating that these were long-term habitation sites. Phase II Testing has been conducted at all but one site. Analysis of the recovered artifacts revealed that these large sites were used by prehistoric inhabitants of the area for processing vegetal and animal foods and for all stages of tool manufacture. Three other sites, while predominantly comprised of milling features, also have small amounts of artifactual materials, primarily limited to debitage. Thirty-six of the sites recorded within a one-mile radius of the Residential Project site are within the boundaries of 33-014370, an unnamed and informally delineated archaeological district comprised of nearly 100 prehistoric archaeological sites. Although research is ongoing, data obtained from chronometric readings and diagnostic artifacts suggest that this area was used as early as the Late Archaic Period and as recently as Protohistoric times. Based on recorded descriptions, it appears that much of this large area was used for gathering plant foods, hunting game animals, and processing such food items on the many boulders provided by the physical environment. Larger site complexes that may represent remnants of somewhat long-term habitation localities have been identified in the western ridge system and along the southwest and southeast foothills of the eastern ridge system.

A search of the *Sacred Lands File* was completed by the Native American Heritage Commission for the Project site, based on the provided USGS quadrangle information, with negative results, although it was noted that this area is sensitive for cultural resources. Responses to the Project scoping letters were received from the Soboba Band of Luiseño Indians and the Pala Band of Mission Indians. The Soboba Band of Luiseño Indians assessed the Project site through their Cultural Resources Department, where it was concluded that although it is outside the existing reservation boundaries, the Project area does fall within the bounds of their Tribal Traditional Use Areas. Their sources indicate that the Project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive to the people of Soboba. At this time, they have requested the following: consultation with the Project proponents and lead agency; that information be transferred to the Soboba Band of Luiseño Indians regarding the progress of the Project as soon as new developments occur; and that they continue to act as a consulting tribal entity for the Project. Further, the Tribe believes that working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For that reason, they request that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department be present during any ground disturbing proceedings including surveys and archaeological testing.

After consulting their maps, The Pala Band of Mission Indians determined that the Project site is not within the boundaries of the recognized Pala Indian reservation and it is beyond the boundaries of the territory the tribe considers its Traditional Use Area. Therefore, they have no objection to the continuation of the Project activities as currently planned and defer to the wishes of tribes in closer proximity to the Project site.

Historic Resources

The literature search offered no information specific to the Project site. According to GLO records maintained by the Bureau of Land Management, the first non-Native owner of a portion of the land now encompassed by the Residential Project site was David W. Jackson. On September 30, 1891, Jackson received a Serial Patent for 80 acres on the west side of what is now the Project site under authority of the Land Act of 1820. As previously discussed in the History section of this report, the Land Act of 1820 reduced both the minimum price of public lands from $2.00 to $1.25 per acre and the minimum size of a standard tract from 160 to 80 acres. The minimum full payment now amounted to $100, rather than $320. Unlike the Homestead Act of 1862, also discussed previously, which required that the property be occupied for five years, including building a house and raising crops, the Land Act permitted that the land simply be purchased, with no additional requirements. Consequently, while it made land more affordable for settler, it also permitted rampant land speculation.

According to the 1870 United States Census, David Jackson was born about 1859 in Bogle, Gentry, Missouri and at the time of the census, he was only 11 years old and living with his mother, Elizabeth Jackson, and brothers Andrew and Samuel. Ten years later, David and his mother were the only household members and David was working in a saw mill. He later moved from Missouri to Murrieta, where he registered to vote in 1890. The next year, he purchased the Project site, but it does not appear that he ever lived there as no structures appear on the land from 1897 to 1976. Additional information regarding David Jackson could

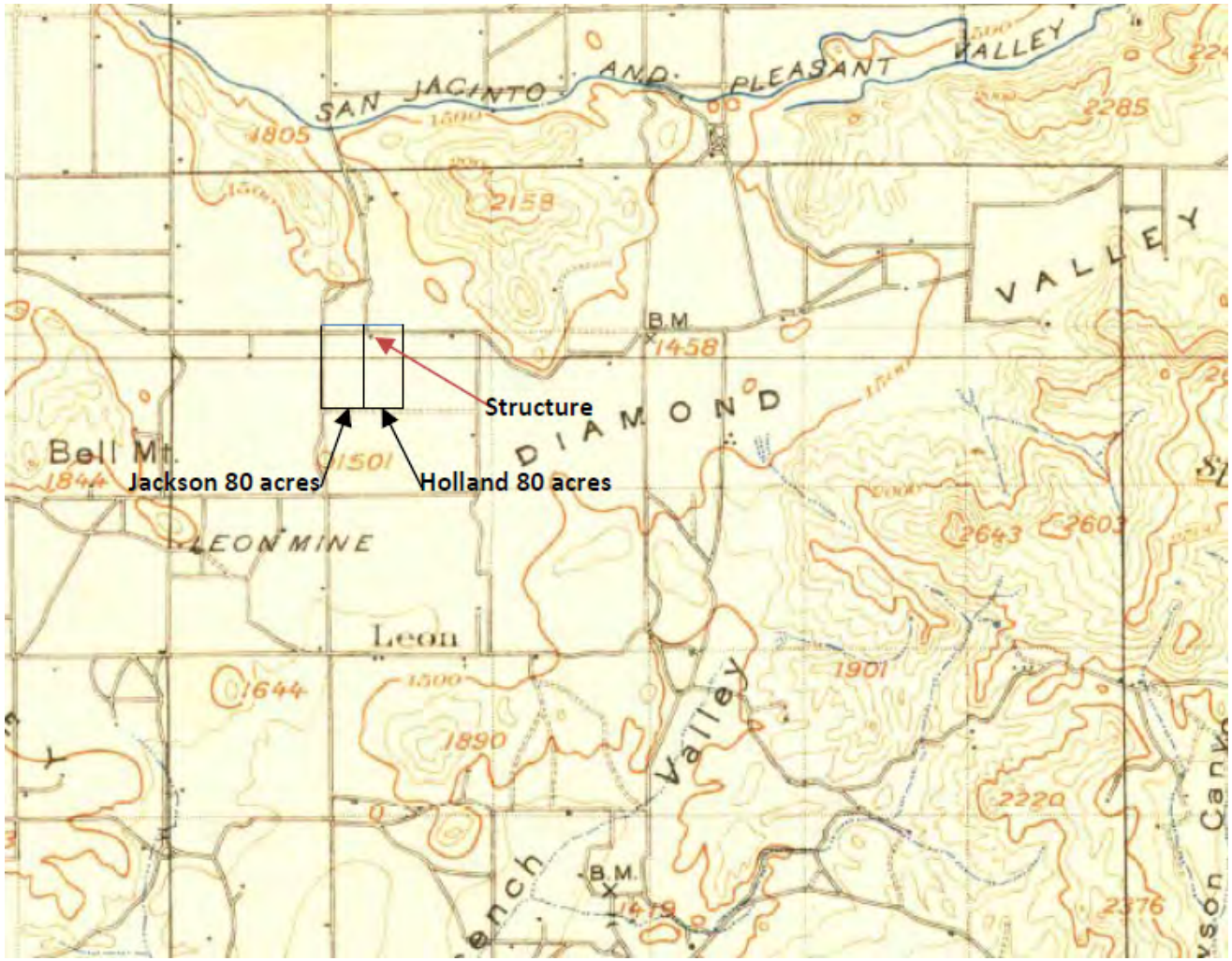
not be found in any available records, including those maintained by the Menifee Valley Historical Association. Since a chain-of-title search was not included in the Phase I scope of work, subsequent ownership of the western 80 acres of the Project site is not known at this time.

GLO records indicate that the first non-Native owner of the eastern 80 acres of what is now the Residential Project site was Thomas W. Holland. A State Volume Patent for the 80 acres known as E½NW¼ of Section 8, Township 6 south, Range 2 west was issued to Thomas W. Holland on November 31, 1891 under authority of the Land Act of 1820.

Thomas Holland was born about 1840 in Georgia. Although no census data has been found for him, it is known that Holland registered to vote in Winchester in 1890 and 1892. No additional information about Holland has been found in available census or voter registration documents. According to Elinor Martin, president of the Menifee Valley Historical Association, although there were many Hollands who settled in this area, there is no record or mention of Thomas Holland.

Cartographic research indicates that by 1897-1898, a structure appears at the northwestern corner of the 80 acres, immediately south of Holland Road. Reference **Figure 4.6-8**, ***Location of Structure on Thomas Holland's Land ca. 1897***.

FIGURE 4.6-8
LOCATION OF STRUCTURE ON THOMAS HOLLAND'S LAND ca. 1897



Source: CRA Report (**Appendix E**)

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Since Thomas Holland registered to vote in Winchester as late as 1892, it was probably his house. In 1904, Thomas W. and Amanda M. Holland were issued a Serial Patent for the 80 acres under authority of the Homestead Act of 1862. In order to receive this patent, they would have been required to live on the property for five years, build a home, and raise crops, which means that they would have moved to the new property by 1899. While it has not been confirmed by chain-of-title research, it is probable that Holland lived on the 80 acres (part of the Project site) until 1899. By 1939, the structure did not exist on the Project site, and no other structures appear through 1976.

As early as 1897, Holland Road, Leon Road, and Craig Avenue had been established, with Holland and Leon appearing as improved roadways and Craig as unimproved. By 1939, Briggs Road appears cartographically as an unimproved road, Leon Road is shown as improved, Holland Road is unimproved east of Leon Road, and Craig Avenue no longer appears cartographically. The same pattern exists through 1976.

Fieldwork

No cultural resources of prehistoric or historic origin were observed within the boundaries of Tentative Tract No. 37439 or the Off-site Project components. Based on this information, the proposed Project will not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. No impacts will occur.

THRESHOLD 9.a: Would the Project alter or destroy an archaeological site?

Less Than Significant with Mitigation Incorporated

Cultural resources of prehistoric (i.e. Native American) or historic origin were not observed within the boundaries of the Project site or Off-site Project components. Cartographic evidence indicates that by 1897, a structure was located immediately south of Holland Road near the center of the northern boundary. The structure was probably Thomas W. Holland's residence. Holland purchased 80 acres of the Project site in 1891. By the next survey in 1939, the structure no longer existed and no evidence of it was observed during the current field survey. Thirty-four cultural resources properties have been recorded within a one-mile radius of the Residential Project site and eight are within one mile of the Off-site Project components located to the west. The majority of these cultural resources are located within 33-14370, an unnamed and informally defined archaeological district comprised of several spatially separated prehistoric and historic-era sites and isolates. The southern boundary of 33-14370 is located immediately north of Holland Road, which forms the northern boundary of the Residential Project site.

Although archaeological district 33-14370, containing spatially separated prehistoric and historic-era sites and isolates is located adjacent to the north boundary of the Project site, no cultural resources of prehistoric (i.e. Native American) or historic origin were observed within the boundaries of the Project site or the Off-site Project components.

Because the Project site has experienced severe ground disturbances in the past, any buried archaeological and/or cultural resources would have already been uncovered or destroyed.

However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, **Mitigation Measures MM-CUL-1** through **MM-CUL-6** are provided to reduce the Project's potential to alter or destroy an archaeological site to a less than significant level.

THRESHOLD 9.b: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?

Less Than Significant with Mitigation Incorporated

No significant archaeological resources were observed within the boundaries of the Residential Project or site the Off-site Project components. As stated in Threshold 9.a, above, because the Project site has experienced severe ground disturbances in the past, any buried archaeological and/or cultural resources would have already been uncovered or destroyed. However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, **Mitigation Measures MM-CUL-1** through **MM-CUL-6** are provided to reduce the Project's potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5 to a less than significant level.

4.6.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Condition SC-CUL-1, below, was identified in the IS to ensure that the Project's potential to affect human remains (which may be encountered during ground-disturbing activities) would remain less than significant:

SC-CUL-1 If Human Remains Found. If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5.

Mitigation Measure(s)

Because the Project site has experienced severe ground disturbances in the past, any buried archaeological and/or cultural resources would have already been uncovered or destroyed. However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, below, are

provided to reduce potential adverse archaeological and/or cultural resource impacts to a less than significant level:

MM-CUL-1 **Conduct Archaeological Sensitivity Training for Construction Personnel. The Applicant must retain a qualified professional archaeologist, approved by the Community Development Director, or designee, who meets U.S. Secretary of the Interior's Professional Qualifications and Standards, to conduct an Archaeological Sensitivity Training for construction personnel before commencing excavation activities. The training session must be carried out by a cultural-resources professional with expertise in archaeology, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The training session will include a handout and will focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of archaeological monitors, and, the general steps a qualified professional archaeologist would follow in conducting a salvage investigation if one is necessary.**

MM-CUL-2 **Unanticipated Resources. The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed: All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the applicant shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.**
*** A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other.**
**** If not already employed by the project developer, a County approved archaeologist shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary.**

MM-CUL-3 **Native American Monitor. Prior to the issuance of grading permits, the developer/permit applicant shall enter into an agreement with the consulting tribe(s) for a Native American Monitor. The Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the**

Archaeological Monitor(s), the Native American 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. The developer/permit applicant shall submit a fully executed copy of the agreement to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.

MM-CUL-4 **Project Archaeologist. Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program. A Cultural Resource Monitoring Plan shall be developed that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a wet-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Project Archaeologist.**

MM-CUL-5 **Artifact Disposition. Prior to Grading Permit Final Inspection, the landowner(s) shall relinquish ownership of all cultural resources that are unearthed on the Project property during any ground-disturbing activities, including previous investigations and/or Phase III data recovery. Historic Resources- all historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, 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 Prehistoric Resources- One of the following treatments shall be applied. a. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures to protect the reburial area from any future impacts. Reburial shall not occur until all required cataloguing, analysis and studies have been completed on the cultural resources, with an exception that sacred items, burial goods and Native American human**

remains are excluded. Any reburial processes 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 County under a confidential cover and not subject to a Public Records Request. b. If reburial is not agreed upon by the Consulting Tribes then the resources shall be curated at a culturally appropriate manner at the Western Science Center, 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 County. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains.

MM-CUL-6 Phase IV Cultural Report. Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures stipulated in the Cultural Resources Management Plan.

4.6.6 Cumulative Impacts

The cumulative study area for cultural and/or archaeological resources is the geographical area of the County of Riverside, which is the geographical area covered by the General Plan. Future development in the County could include excavation and grading, which could potentially impact cultural and/or archaeological resources and human remains. The cumulative effect of future development in the County is the continued loss of cultural and/or archaeological resources. Therefore, the proposed Project, in conjunction with other future development in the County, has the potential to cumulatively impact cultural and/or archaeological resources.

However, CEQA requires the County to conduct an environmental review of each project submitted. If the project has the potential to result in a significant impact to cultural, archaeological, and/or paleontological resources, CEQA requires the County to require the project proponent to investigate the site to determine the nature and extent of the existing resources and identify appropriate mitigation measures. If subsurface cultural and/or archaeological resources are assessed and/or protected as they are discovered, impacts to

these resources will be less than significant. In addition, applicable General Plan policies will be implemented to reduce the effects of future development in the County.

With implementation of **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, the Project's contribution to the cumulative loss of known and unknown cultural and/or archaeological resources in the County will be reduced to a level of less than significant.

4.6.7 Unavoidable Significant Adverse Impacts

Based on the information above and in the IS, with adherence to **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6,** all potential impacts to cultural, and/or archaeological resources will be limited and reduced to a level of less than significant. As a result, implementation of the proposed Project will not result in any unavoidable Project-specific or cumulative adverse impacts to cultural and/or archaeological, resources.

4.7 GEOLOGY AND SOILS

4.7.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of geology and soils from implementation of the Project. The Geology and Soils Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

10. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones.
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death?
b. Be subject to 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?

11. Liquefaction Potential Zone.
a. Be subject to seismic-related ground failure, including liquefaction?

12. Ground-shaking Zone.
a. Be subject to strong seismic ground shaking?

13. Landslide Risk.
a. 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, collapse, or rockfall hazards?

14. Ground Subsidence.
a. 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 ground subsidence?

15. Other Geologic Hazards.
a. Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?

16. Slopes.
a. Change topography or ground surface relief features?
b. Create cut or fill slopes greater than 2:1 or higher than 10 feet?
c. Result in grading that affects or negates subsurface sewage disposal systems?

17. Soils.
a. Result in substantial soil erosion or the loss of topsoil?
b. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?
c. Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

18. Erosion.
a. Change deposition, siltation, or erosion that may modify the channel of a river or stream or the bed of a lake?
b. Result in any increase in water erosion either on or off site?

19. Wind Erosion and Blowsand from Project either on- or off-site.
a. Be impacted by or result in an increase in wind erosion and blowsand, either on- or off-site?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 10.a through 17.c, and 19.a, related to geology and soils (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified either "no impact" or "less than significant impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining two (2) issue areas 18.a and 18.b, related to geology and soils in the questions asked above, **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The text contained in issue areas 18.a. and 18.b. was revised and condensed so that there is just one issue area; this text revision will be reflected in the DEIR.

Therefore, the following one (1) issue area will be analyzed in the DEIR:

18. Erosion.
a. Result in substantial erosion or siltation on-site or off-site?

Standard Conditions SC-GEO-1 (Ordinance No. 457), **SC-GEO-2** (compliance with the geotechnical conclusions), **SC-GEO-3** (plant and irrigate), **SC-AQ-2** (SCAQMD Rule 403), **SC-HYD-1** (Best Management Practices (BMPs)), and **SC-HYD-2** (Water Quality Management Plan (WQMP)) have been carried over to this DEIR from the IS.

There were no mitigation measures presented in the IS to be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- Geotechnical Investigation and Infiltration Testing. Tentative Tract Map 37439, Riverside County, California, prepared by RMA GeoScience March 20, 2016 (*Geo Investigation*, **Appendix F**)
- *Riverside County General Plan (Safety Element)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- *Sun City/Menifee Valley Area Plan* https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- *Harvest Valley/Winchester Area Plan*

https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding geology and soils were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 18.a. is the focus of the following evaluation of geology and soils.

All the Tables and Figures in this Subchapter are from the *Geo Investigation*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical study, which is provided in Volume 2 of the DEIR, the Technical Appendices.

4.7.2 Environmental Setting

4.7.2.1 Testing Overview

A field exploration of the Project site was conducted on September 27 and 28, 2017, and consisted of 5 exploratory borings to depths of 15 to 21 feet, and 4 test pits to depths of 8 to 9 feet. The purpose of the borings was to log and sample the underlying soil. The purpose of the test pits was to determine the groundwater infiltration rate. The boring and test pit locations are shown on **Figure 4.7-1**, ***Boring and Trench Location Map - Plate 1*** *and* **Figure 4.7-2**, ***Boring and Trench Location Map – Plate 2***.

Laboratory testing was then performed on the soil samples gathered during the field exploration to identify the soils encountered during the subsurface exploration. The testing assessed: the amount of silt and clay present in the soil, soluble sulfate content, soil reactivity (p/H), electrical conductivity (Ec), water content, density of split-barrel samples, and the expansion index.

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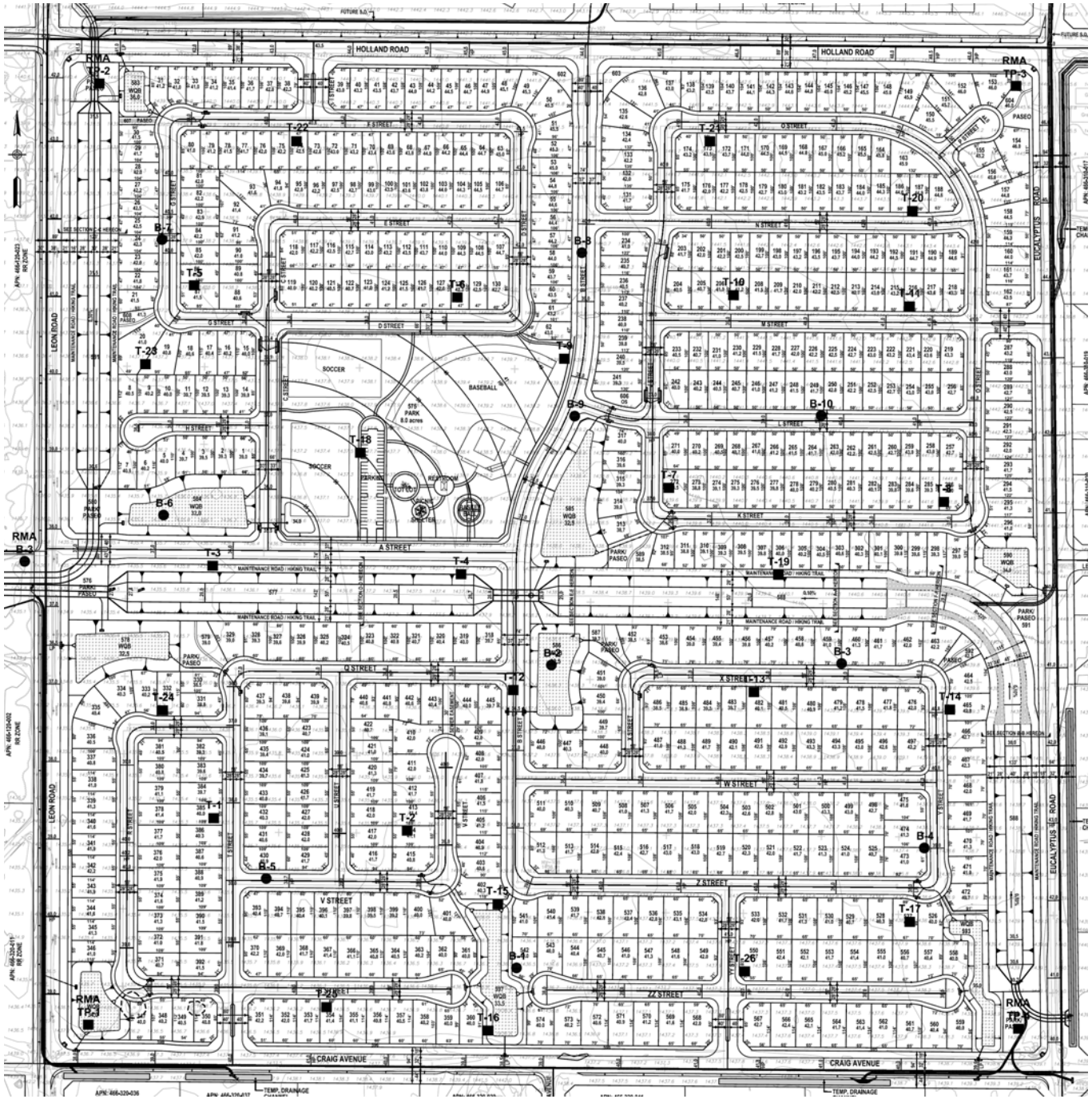
FIGURE 4.7-1
BORING AND TRENCH LOCATION MAP - PLATE 1

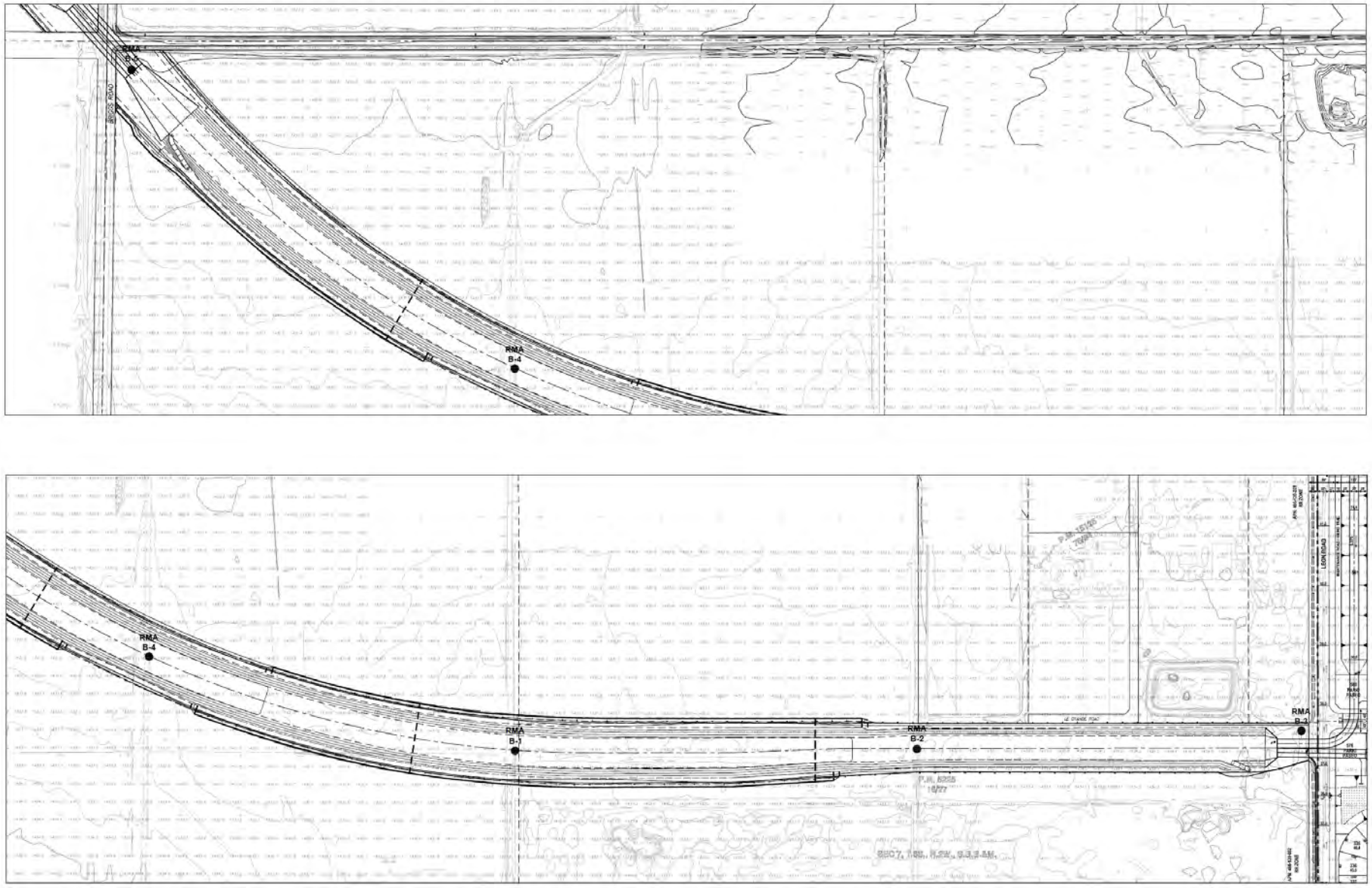


RMA LEGEND

RMA TP-1 ■	RMA Geoscience Test Pit Location
RMA B-1 ●	RMA Geoscience Boring Location
TP-1 ■	EcoTech Test Pit Location
B-1 ●	EcoTech/GeoCon Boring Location
◌	Bedrock Outcrop Location

Source: GEO Report (**Appendix F**)

FIGURE 4.7-2
BORING AND TRENCH LOCATION MAP - PLATE 2



Source: GEO Report (**Appendix F**)

4.7.2.2 Regional Geologic Setting, Local Geology and Project Earth Materials

The Project site is located in the Perris Block of the Southern California Batholith, a large block of granitic bedrock that was formed during the Cretaceous time, approximately 90 to 100 million years ago. While internally unfaulted and considered structurally stable, the Perris Block is bounded on the west by the Elsinore Fault zone and on the east by the San Jacinto Fault zone. Rocks in the region of the Project site consist of Cretaceous-age Quartz Diorite. Small outcrops of the granitic bedrock are visible on the Project site, and larger outcrops are visible in the hills to the northeast.

Locally, the Project site is located between the Menifee Valley to the west and Domenigoni Valley to the east, which are characterized by stratified sequences of moderately consolidated alluvial sand, silt and clay.

The ground elevation of the Project site is 1435 feet above mean sea level (MSL).

Reference the **Figure 4.7-3**, ***Geotechnical Map***.

4.7.2.2.a Earth Materials

The Residential Project site is surrounded on all sides by flat ungraded properties and is underlain by well-consolidated clayey sand alluvium, which is underlain at depth by quartz diorite bedrock. Outcrops of the bedrock that have been weathered to low relief are exposed in the southwest corner.

The Off-site Project components lie immediately to the west of the Residential Project site and are also composed of flat agricultural land.

A brief description of the earth materials encountered at the Project site is presented below:

<u>Topsoil/Disturbed Native Soil (Af)</u>

Tilled agricultural topsoil was exposed in all borings and test pits to a depth of approximately 2-3 feet below existing ground surface. The topsoil consists of light brown, silty fine sand that contains small quantities of organics from fertilization. The maximum depth of topsoil/fill encountered onsite was 3 feet.

<u>Native Alluvial Soil (Qal)</u>

Native soil, exposed in all 4 test pits and 5 exploratory borings (as well as the 26 test pits and 19 borings excavated by previous consultants), consists of reddish brown to dark brown, clayey fine to medium sand that is in a moist to damp and dense to very dense condition, and grades to coarser material at depth. Minor porosity was observed in more clayey materials. Maximum depth of soil encountered during the investigation was 21 feet, and maximum depth of soil documented in 2005 by previous consultants is 50 feet.

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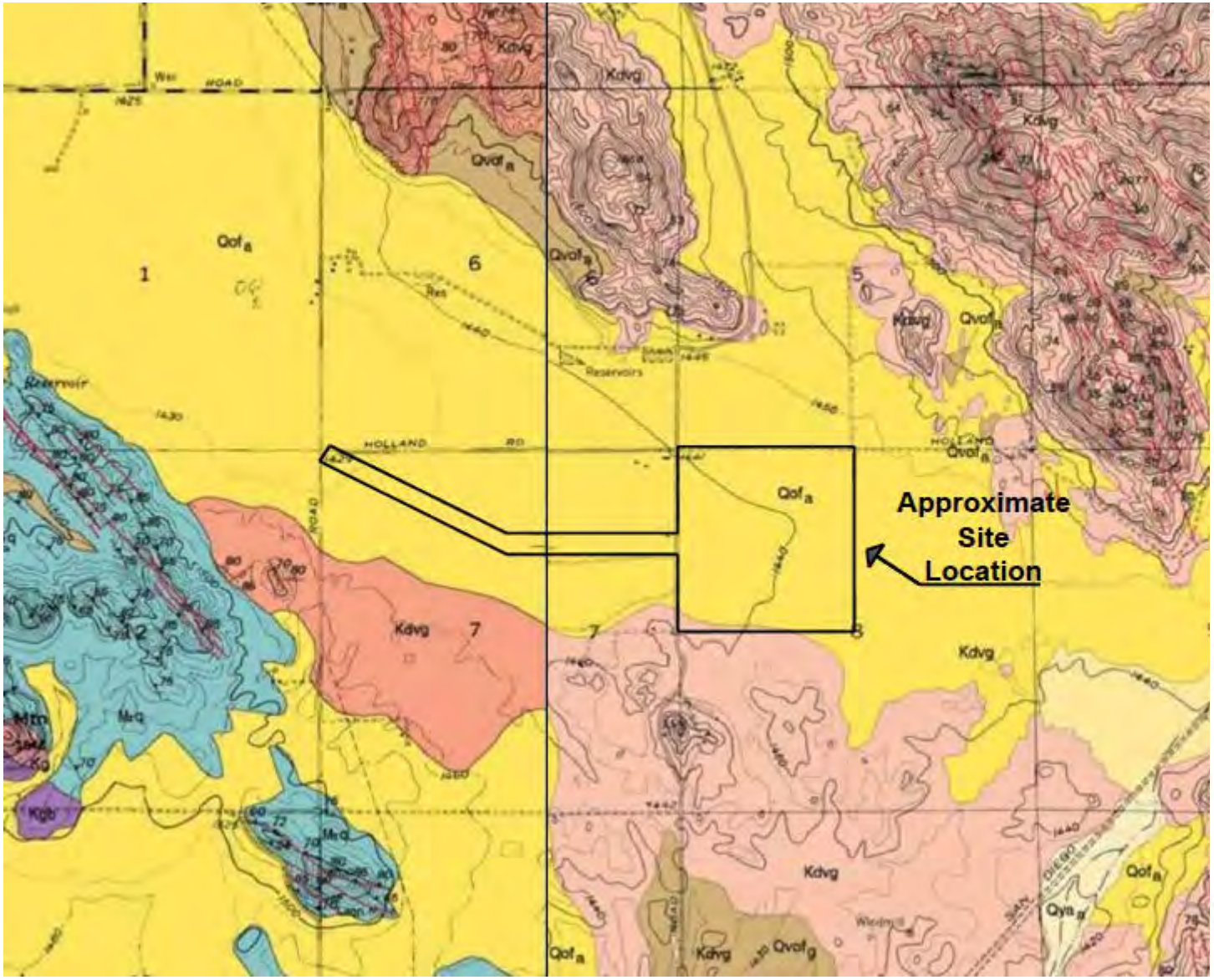
FIGURE 4.7-3
GEOTECHNICAL MAP



DESCRIPTION OF MAP UNITS

Qw, Qv

VERY YOUNG SURFICIAL DEPOSITS—Sediment recently transported and deposited in channels and washes, on surfaces of alluvial fans and alluvial plains, and on hillslopes. Soil-profile development is non-existent. Includes:

Very young wash deposits (late Holocene)—Unconsolidated bouldery to sandy alluvium of active and recently active washes

Very young alluvial valley deposits (late Holocene)—Active and recently active fluvial deposits along valley floors. Consists of unconsolidated sandy, silty, or clay-bearing alluvium

YOUNG SURFICIAL DEPOSITS—Sedimentary units that are slightly consolidated to cemented and slightly to moderately dissected. Alluvial fan deposits (Qyf series) typically have high coarse:fine clast ratios. Younger surficial units have upper surfaces that are capped by slight to moderately developed pedogenic-soil profiles (A/C to A/AC/$B_{cambric}C_{ox}$ profiles). Includes:

Qyf

Young alluvial fan deposits (Holocene and late Pleistocene)—Unconsolidated deposits of alluvial fans and headward drainages of fans. Consists predominately of gravel, sand, and silt. Trunk drainages and proximal parts of fans contain higher percentage of coarse-grained sediment than distal parts. Restricted to small area north of Double Butte

Qya

Young alluvial channel deposits (Holocene and late Pleistocene)—Fluvial deposits along canyon floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

Qyv

Young alluvial valley deposits (Holocene and late Pleistocene)—Fluvial deposits along valley floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

OLD SURFICIAL DEPOSITS—Sedimentary units that are moderately consolidated and slightly to moderately dissected. Older surficial deposits have upper surfaces that are capped by moderately to well-developed pedogenic soils (A/AB/B/C_{ox} profiles and Bt horizons as much as 1 to 2 m thick and maximum hues in the range of 10YR 5/4 and 6/4 through 7.5YR 6/4 to 4/4 and mature Bt horizons reaching 5YR 5/6). Includes:

Qof

Old alluvial fan deposits (late to middle Pleistocene)—Reddish brown, gravel and sand alluvial fan deposits; indurated, commonly slightly dissected. In places includes thin alluvial fan deposits of Holocene age

Qoa

Old alluvial channel deposits (late to middle Pleistocene)—Fluvial sediments deposited on canyon floors. Consists of moderately indurated, commonly slightly dissected gravel, sand, silt, and clay-bearing alluvium. Locally capped by thin, discontinuous alluvial deposits of Holocene age. Restricted to single occurrance north of Railroad Canyon Reservoir

VERY OLD SURFICIAL DEPOSITS—Sediments that are slightly to well consolidated to indurated, and moderately to well dissected. Upper surfaces are capped by moderate to well developed pedogenic soils (A/AB/B/C_{ox} profiles having Bt horizons as much as 2 to 3 m thick and maximum hues in the range of 7.5YR 6/4 and 4/4 to 2.5YR 5/6)

Qvof

Very old alluvial fan deposits (middle to early Pleistocene)—Mostly well-dissected, well-indurated, reddish-brown alluvial fan deposits. Grain size chiefly sand and gravel

Qvoa

Very old alluvial channel deposits (middle to early Pleistocene)—Fluvial sediments deposited on canyon floors. Consists of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt, and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age. Deposits in Quail Valley area contain rounded cobbles

Kgb

Gabbro (Cretaceous)—Mainly hornblende gabbro. Includes Virginia quartz-norite and gabbro of Dudley (1935), and San Marcos gabbro of Larsen (1948). Typically brown-weathering, medium-to very coarse-grained hornblende gabbro; very large poikilitic hornblende crystals are common, and very locally gabbro is pegmatitic. Much is quite heterogeneous in composition and texture. Includes noritic and dioritic composition rocks

Kdvg

Granodiorite to tonalite—Relatively uniform, massive hornblende biotite granodiorite grading into tonalite. Principal rock type of Domenigoni Valley pluton. Contains some mafic rich rocks in southern part of pluton. Common accessory minerals are zircon, sphene, apatite, and magnetite-ilmenite. Minute rutile crystals impart bluish opalescence to quartz. Small masses of epidote and (or) tourmaline rock occur locally and appear to replace granodiorite to tonalite. Contains moderately abundant to abundant equant mafic inclusions. Zircon age is 117.8 Ma_{cl} and 112.8 Ma_{cl} (pers comm W. Premo) and $^{40}Ar/^{39}Ar$ age of 104 Ma for biotite and 95.5 Ma for potassium feldspar

Mrq

Quartz-rich rocks (Mesozoic)—Quartzite and quartz-rich metasandstone

Source: Subchapter 8.3 of this DEIR, Initial Study

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Quartz Diorite (Kdvg)

Bedrock was not encountered in the test pits or borings but is exposed at the surface in the southwest corner of the Project site. Highly weathered bedrock was also documented on the Project site in 2004, at a depth of 35 feet. The bedrock consists of light gray to whitish gray, medium-grained quartz diorite. The rock was mostly massive with some minor fracturing on the exposed face and was slowly excavated by a backhoe with considerable difficulty. Bedrock removal will require heavy construction equipment.

Based on the results of the laboratory testing, the above referenced earth materials have a very low expansion potential; however, some medium expansion soils may be encountered at the completion of grading.

4.7.2.3 Surface Water and Groundwater

No groundwater was encountered in any of the test pits that were excavated at the site to a maximum depth of 9 feet below existing grade or the borings that were excavated to 21 feet below existing grade. No groundwater was encountered by previous consultants in 2004, in borings excavated to 50 feet below existing grade. No springs or seeps were observed on the Project site.

4.7.2.4 Faulting and Seismicity

The Project site is not located in an Alquist-Priolo Earthquake Fault Zone, and there are no known active faults that traverse the Project site. However, there are faults in close enough proximity to cause moderate to intense ground shaking during the lifetime of the proposed Project. Additionally, the Project site has experienced earthquake-induced ground shaking in the past and can be expected to experience further shaking in the future. Reference **Table 4.7-1**, ***Regional Faults in Project Vicinity***, for a list of faults the vicinity of the Project site that are capable of producing a moment magnitude exceeding 6.0.

Table 4.7-1
Regional Faults in Project Vicinity

Fault Name	Approximate Distance (km)	Maximum Magnitude	Slip Rate
Elsinore-Temecula	16.9	6.8	5.00
San Jacinto-San Jacinto Valley	18.8	6.9	12.00
San Jacinto-Anza	20.0	7.2	12.00
Elsinore-Glen Ivy	21.7	6.8	5.00
Elsinore-Julian	33.7	7.1	5.00
San Jacinto-San Bernardino	40.4	6.7	12.00
San Andreas	44.2	7.4	24.00

4.7.2.5 Landslides

The *Geo Investigation* did not identify any on- or off-site landslide, or rockfall hazards. Based

on **Figure 4.7-3**, soil characteristics for adjacent properties to the north, east, and west are similar to the Project site (Native Alluvial Soil (Qof_a)), with Quartz Diorite/bedrock (Kdvg) to the south. Slopes steeper than the Project site are located approximately 0.37 miles to the north and 1.0 miles to the northeast. These steeper slopes are located at a distance far enough from the Project site such that they will not pose any off-site landslide, or rockfall hazards.

4.7.2.6 Slope Failures, Gross Failures and Surficial Failures

The undisturbed native soil on the Project site is suitable for the support of structural fill, provided all topsoil and disturbed native soils are removed to at least one foot into the undisturbed native soil prior to placement of compacted fill, or a minimum of two feet below planned footings, whichever is greater.

4.7.2.7 Earthwork Shrinkage and Subsidence

Shrinkage is the decrease in volume of soil upon removal and recompaction expressed as a percentage of the original in-place volume. Subsidence occurs as natural ground is densified to receive fill. These factors account for changes in earth volumes that will occur during grading. The Geotechnical Engineer estimates are as follows:

- Shrinkage factor = 10% to 12% for soil removed and replaced as compacted fill.
- Subsidence factor = 0.1 foot.

The degree to which fill soils are compacted and variations in the density of existing soils on the Project site will influence earth volume changes. For this reason, some adjustments in grades near the completion of grading could be required to balance the earthwork on the Project site.

4.7.2.8 Liquefaction and Secondary Earthquake Hazards

Potential secondary seismic hazards that can affect the Project site include liquefaction, tsunamis, seiches, seismically induced settlement, seismically induced flooding and seismically induced landsliding.

<u>Liquefaction</u>

Liquefaction is a phenomenon where earthquake-induced ground vibrations increase the pore pressure in saturated, granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. In order for liquefaction to occur, three criteria must be met: underlying loose, coarse-grained (sandy) soils, a groundwater depth of less than about 50 feet, and a potential for seismic shaking from nearby large-magnitude earthquake.

The Project site is underlain by dense to very dense, cohesive alluvial soils with groundwater depth greater than 50 feet below ground surface. Therefore, the risk of liquefaction occurring during a design seismic event is considered very low.

Tsunamis and Seiches

Tsunamis are sea waves that are generated in response to large-magnitude earthquakes. When these waves reach shorelines, they sometimes produce coastal flooding. Seiches are the oscillation of large bodies of standing water, such as lakes, that can occur in response to ground shaking. Tsunamis do not pose hazards due to the inland location of the Project site. According to the Safety Element, the Project site is not located in a special flood hazard area, therefore seiches do not pose a hazard to the Project site.

Seismically Induced Settlement

Seismically induced settlement occurs most frequently in areas underlain by loose, granular sediments. Damage as a result of seismically induced settlement is most dramatic when differential settlement occurs in areas with large variations in the thickness of underlying sediments. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. Since the Project site is underlain by dense, cohesive alluvial soils, seismically induced settlement is considered a minimal design concern during a seismic event.

Seismically Induced Flooding

According to the Safety Element, the Project site lies within a dam hazard zone due to its proximity to Diamond Valley Lake. Consequently, this issue is considered a potential hazard at the Project site. Seismically induced flooding will be analyzed in Subchapter 4.10 (Hydrology and Water Quality) of this DEIR.

4.7.2.9 Regulatory Setting

State

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Act) was signed into state law in 1972. Its primary purpose is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The Act requires the State Geologist to delineate "Earthquake Fault Zones" along faults that are "sufficiently active" and "well defined." The Act also requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this Act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act (SHMA) was adopted by the state in 1990 to protect the public from the effects of nonsurface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey prepares and provides local governments with seismic hazard zone maps that identify areas susceptible to amplified

shaking, liquefaction, earthquake-induced landslides, and other ground failures. Geotechnical investigations for projects within seismic hazard zones are required by the Seismic Hazards Mapping Act to evaluate seismic hazards.

California Building Code

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission and the code is also known as Title 24, Part 2 of the California Code of Regulations (24 Cal. Code Regs.). The most recent building standard adopted by the legislature and used throughout the State is the 2016 version of the CBC, often with local, more restrictive amendments that are based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground shaking with the specified probability of occurring at a site. **Standard Conditions SC-GEO-1** (Ordinance No. 457), **SC-GEO-2** (compliance with the geotechnical conclusions), **SC-GEO-3** (plant and irrigate), **SC-AQ-2** (SCAQMD Rule 403), **SC-HYD-2** (Best Management Practices (BMPs)), and **SC-HYD-3** (Water Quality Management Plan (WQMP)) have been carried over to this DEIR from the IS.

Seismic Design Parameters

Seismic design parameters have been developed in accordance with Section 1613 of the 2016 California Building Code (CBC) using the online U.S. Geological Survey Seismic Design Maps Calculator and the latitude and longitude of the Project site. The calculator generates probabilistic and deterministic maximum considered earthquake spectral parameters represented by a 5-percent damped acceleration response spectrum having a 2-percent probability of exceedance in 50 years. The deterministic response accelerations are calculated as 150 percent of the largest median 5-percent damped spectral response acceleration computed on active faults within a region, where the deterministic values govern. The calculator does not, however, produce separate probabilistic and deterministic results. The parameters generated for the Project site are referenced in **Table 4.7-2**, ***2016 California Building Code (CBC) Seismic Parameters***.

Table 4.7-2
2016 California Building Code (CBC) Seismic Parameters

Parameter	Value
Site Location	Latitude = 33.6671 degrees Longitude = -117.1151 degrees
Site Class	Site Class = D Soil Profile Name: Stiff Alluvial Soil
Mapped Spectral Accelerations (Site Class B)	S_s (0.2- second period) = 1.500g S_1 (1-second period) = 0.600g
Site Coefficients (Site Class D)	F_a = 1.0 F_v = 1.5
Maximum Considered Earthquake Spectral Accelerations (Site Class D)	S_{MS} (0.2- second period) = 1.500g S_{M1} (1-second period) = 0.900g
Design Earthquake Spectral Accelerations (Site Class D)	S_{DS} (0.2- second period) = 1.000g S_{D1} (1-second period) = 0.600g

Table 4.7-2, shows that the mapped spectral response acceleration parameter for a 1-second period (S_1) is less than 0.75g. Therefore, for Occupancy Category II, the Seismic Design Category is D. Consequently, as required for Seismic Design Categories C through F slope instability, liquefaction, total and differential settlement and surface displacement due to faulting or seismically induced flooding are evaluated below.

Peak earthquake ground acceleration adjusted for site class effects (PGA_M) has been determined in accordance with ASCE 7-10 Section 11.8.3 as follows: $PGA_M = F_{PGA} \times PGA = 1.0 \times 0.500 = 0.5g$.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act requires that sellers of real property and their agents to 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. California law also requires that when houses built before 1960 are sold, the seller must give the buyer a completed earthquake hazards disclosure report and a booklet titled "The Homeowners Guide to Earthquake Safety." This publication was written and adopted by the California Seismic Safety Commission.

Soils Investigation Requirements

Requirements for soils investigations for subdivisions requiring tentative and final maps, and for other specified types of structures, are in California Health and Safety Code Sections 17953–17955, and in Section 1802 of the 2010 California Building Code. Testing of samples from subsurface investigations (such as from borings or test pits) is required. Studies must be undertaken, as needed, to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

Regional

SCAQMD Rules 403 and 403.2: Fugitive Dust Control

Construction operations are subject to the requirements established by the SCAQMD including Rule 403, Fugitive Dust. Rule 403 requires the use of best available control measures for fugitive dust. **Standard Conditions SC-GEO-1** (Ordinance No. 457), **SC-GEO-2** (compliance with the geotechnical conclusions), **SC-GEO-3** (plant and irrigate), **SC-AQ-2** (SCAQMD Rule 403), **SC-HYD-2** (Best Management Practices (BMPs)), and **SC-HYD-3** (Water Quality Management Plan (WQMP)) have been carried over to this DEIR from the IS.

General Plan Goals and Policies

The Safety Element contains the following applicable Goals and/or Policies:

- **Policy S 1.1** Mitigate hazard impacts through adoption and strict enforcement of current building codes, which will be amended as necessary when local deficiencies are identified.
- **Policy S 2.2** Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory buildings.
- **Policy S 2.5** Require that engineered slopes be designed to resist seismically- induced failure. For lower-risk projects, slope design could be based on pseudo-static stability analyses using soil engineering parameters that are established on a site-specific basis. For higher-risk projects, the stability analyses should factor in the intensity of expected ground shaking, using a Newmark-type deformation analysis.
- **Policy S 2.6** Require that cut and fill transition lots be over-excavated to mitigate the potential of seismically-induced differential settlement.
- **Policy S 2.7** Require a 100% maximum variation of fill depths beneath structures to mitigate the potential of seismically-induced differential settlement.
- **Policy S 3.3** Before issuance of building permits, require certification regarding the stability of the site against adverse effects of rain, earthquakes, and subsidence.

The Sun City/Menifee Valley Area Plan and the Harvest Valley/Winchester Area Plan each contain one applicable Goal and/or Policy:

- **SCMVAP 16.1/HVWAP 22.1** Protect life and property from seismic related incidents/events through adherence to the Seismic Hazards section of the General Plan Safety Element.

4.7.3 Thresholds of Significance

As discussed in Section 4.7.1, the Project impacts to one (a) criterion pertaining to geology and soils will be analyzed in this DEIR. According to the IS, the Project would have a significant impact if it would:

18. Erosion.

a. Result in substantial erosion or siltation on-site or off-site?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential geology and soils changes in the environment are addressed in response to the above thresholds in the following analysis.

4.7.4 Potential Impacts

THRESHOLD 18.a: Would the Project result in substantial erosion or siltation on-site or off-site?

Less Than Significant Impact

The proposed Project will utilize bioretention basins to treat for water quality purposes. The required water quality volume was determined by using the Santa Ana Watershed Best Management Practices Design Volume Spreadsheets. The effective impervious fraction was calculated based upon the tributary land use designations.

A site drainage plan is required by the County and will be reviewed by the Riverside County Building and Safety Department and/or RCFC&WCD. Erosion and siltation reduction measure BMPs contained in the required SWPPP will be implemented during construction. At the completion of construction, the Project will consist of impervious surfaces, landscaped planters, and post-construction BMPs. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are required in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. **Standard Condition SC-GEO-3** requires planting and irrigation of all manufactured slopes equal to or greater than 3 feet in vertical height and slopes 15 feet or greater in vertical height. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are not considered unique mitigation under CEQA.

The Project site will create drainage conveyance devises that will ultimately end up at discharges into private lakes, Salt Creek, Canyon Lake and Lake Elsinore. Aside from the accumulations of water in the future detention basins, the proposed Project is not forecast to substantially change the amount of surface water in any water body, including during future storms up to the 100-year runoff volume.

The Project will not in substantial erosion or siltation on-site or off-site. Impacts will be less than significant.

Please reference detailed analysis in Subchapter 4.10, Hydrology and Water Quality of this DEIR.

4.7.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Conditions SC-GEO-1 through **SC-GEO-3**, **SC-AQ-2 and SC-HYD-1** through **SC-HYD-3** below, were identified in the IS in order to ensure that the Project's potential to result in exposure of persons to geological hazards would remain less than significant:

SC-GEO-1 **The Project shall comply with the most recent version of Ordinance No. 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.**

SC-GEO-2 **Prior to the issuance of a grading and/or building permit, the Project applicant shall submit plans that demonstrate compliance with the geotechnical conclusions and recommendations contained in the *Geo Investigation* as it pertains to:**

- **General Earthwork and Grading;**
- **Earthwork Shrinkage and Subsidence;**
- **Removal Recommendations;**
- **Slopes;**
- **Seismic Design Parameters;**
- **Liquefaction and Secondary Earthquake Hazards;**
- **Foundations;**
- **Lateral Load Resistance;**
- **Interior lab on Grade;**
- **Miscellaneous Concrete Flatwork;**
- **Cement Type and Corrosion Potential;**
- **Temporary Slopes;**
- **Utility Trench Backfill;**
- **Preliminary Pavement Sections;**
- **Drainage and Moisture Proofing;**
- **Geotechnical Observations;**
- **Plan Review; and**
- **On-Site Stormwater Disposal.**

SC-GEO-3 **The Project applicant shall plant and irrigate all manufactured slopes equal to or greater than 3 feet in vertical height with drought tolerant grass or ground cover; slopes 15 feet or greater in vertical height shall also be planted with drought tolerant shrubs or trees in accordance with the requirements of Ordinance No. 457.**

SC-AQ-2 **Prior to grading permit issuance, all applicable measures shall be incorporated into Project plans and specifications as implementation of Rule 403, which include but are not limited to:**

- **All clearing, grading, earth-moving, or excavation activities shall cease**

when winds exceed 25 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 mid-morning, 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 miles per hour or less.**

SC-HYD-1 Site Drainage Plan. A site drainage plan is required by the County of Riverside and will be reviewed by the Building and Safety Department. The final grading and drainage plan will be approved by the Building and Safety Department during plan check review.

SC-HYD-2 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

SC-HYD-3 The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

Mitigation Measure(s)

No mitigation measures are required for geology/soils resources.

4.7.6 Cumulative Impacts

Development of the Project will be affected by geotechnical constraints. None of the future Project-related activities are forecast to cause changes in geology or soils or the constraints affecting the Project area that cannot be fully mitigated. Geology and soil resources are inherently site specific and the only cumulative exposure would be to a significant geological or soil constraint (onsite fault, significant ground shaking that could not be mitigated or steep slopes creating a landslide exposure). Therefore, the Project has no potential to make a cumulatively considerable contribution to any significant geology or soils impact. Project soil and geology impacts are less than significant with the incorporation of **Standard Conditions SC-GEO-1** through **SC-GEO-3**, **SC-AQ-2**, **SC-HYD-1** through **SC-HYD-3**.

4.7.7 Unavoidable Significant Adverse Impacts

The existing geology and soil resources and constraints have been evaluated for impact to and from the implementation of the Project. No unavoidable significant adverse geology or soil impacts have been identified in the IS or DEIR. **Standard Conditions SC-GEO-1** through **SC-GEO-3**, **SC-AQ-2**, **SC-HYD-1** through **SC-HYD-3** have been identified, that must be implemented to control exposure to potentially strong seismic ground shaking, seismic ground shaking – including liquefaction, soil erosion and loss of topsoil, lateral spreading, subsidence, expansive soils and collapse. With implementation of the recommended seismic design measures, structures and future residents or inhabitants of these structures, can be adequately protected. The Project can be implemented without causing or experiencing significant unavoidable adverse geology or soil impacts.

4.8 GREENHOUSE GAS EMISSIONS

4.8.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of greenhouse gas emissions from implementation of the Project. The Greenhouse Gas Emissions Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

20. Greenhouse Gas Emissions.

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?

Based on the analysis in the IS, it was determined that the above two (2) issue areas related to greenhouse gas emissions **would** be further analyzed in the EIR.

No standard conditions or mitigation measures were presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *Canterwood (Tentative Tract Map No. 37439) Greenhouse Gas Analysis, County of Riverside*, prepared by Urban Crossroads, Inc., February 27, 2019 (*GHG Analy*sis, **Appendix G**)
- *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis Report*, dated prepared by Urban Crossroads, Inc., February 27, 2019 (Air Quality Analysis, **Appendix C**)
- *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**)

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter #6 from Southern California Association of Governments (SCAG) (dated 11/7/18) states:

- Southern California Association of Governments (SCAG) is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities.
- SCAG reviews EIRs for Projects of regional significance for consistency with regional plans pursuant to CEQA and the CEQA Guidelines.
- SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for the preparation of the Regional Transportation Plan (RTP), including the Sustainable Communities Strategy (SCS).
- SCAG has reviewed the NOP for the Project.
- SCAG asks that environmental documentation be mailed to SCAG's office in Los Angeles or emailed to the contact information in the letter.

- The Lead Agency has the sole discretion in determining a local project's consistency with the RTP/SCS.
- SCAG recommends preparing an analysis that compares the Project side-by-side with SCAG's 2016 RTP/SCS Goals to determine whether the Project is consistent, inconsistent or in-applicable with the regional goals.
- A wide range of land use and transportation strategies are included in the 2016 RTP/SCS.
- Adopted demographics and growth forecasts (population, households and employment) are provided for the SCAG Region and for unincorporated Riverside County for the years 2020, 2035, and 2040.
- The Final Program EIR for the 2016 RTP/SCS includes a list of project-level performance-based mitigation measures that are applicable and feasible. These mitigation measures may be considered by the County for adoption and implementation.
- The County as Lead Agency is responsible for assigning project-level mitigation to meet project-level performance standards for each CEQA resource category.

Response: Consistency with the RTP and SCS is analyzed in the following: Subchapter 4.3 Air Quality; Subchapter 4.8 Greenhouse Gases; Subchapter 4.14 Population and Housing; and Subchapter 4.15 Transportation.

No comments were received in response to the NOP/IS with respect to greenhouse gas emissions at the scoping meeting held on November 5, 2018.

Therefore, the above issues identified in 20.a and 20.b, and the issues identified in the NOP/IS (summarized above), are the focus of the following evaluation of greenhouse gas emissions.

All the Tables and Figures in this Subchapter are from the *Greenhouse Gas Analysis*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical studies, which are provided in Volume 2 of the DEIR, the Technical Appendices.

4.8.2 Environmental Setting

4.8.2.1 Introduction to Global Climate Change (GCC)

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.

An individual project like the proposed Project cannot generate enough greenhouse gas emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of greenhouse gases combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, this section will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

4.8.2.2 Global Climate Change Defined

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, perfluorocarbons and sulfur hexafluoride. 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.

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.

Although California's rate of growth of greenhouse gas emissions is slowing, the state is still a substantial contributor to the U.S. emissions inventory total. In 2004, California is estimated to have produced 492 million gross metric tons of CO_2e greenhouse gas emissions. Despite a population increase of 16% between 1990 and 2004, 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.

4.8.2.3 Greenhouse Gas Emissions 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 2016. For the Year 2016, the sum of these emissions totaled approximately 28,747,554 Gg CO_2e. The GHG emissions in more recent years may differ from the inventories presented in **Table 4.8-1**,***Top GHG Producer Countries and the European Union****,* below. However, the data is representative of currently available inventory data.

Table 4.8-1
Top GHG Producer Countries and the European Union

Emitting Countries	GHG Emissions (Gg CO_2e)
China	11,895,765
United States	6,511,302
European Union (28 member countries)	4,291,252
India	2,643,817
Russian Federation	2,100,850
Japan	1,304,568
Total	**28,747,554**

United States

As noted in **Table 4.8-1**, the United States, as a single country, was the number-two producer of GHG emissions in 2016. The primary greenhouse gas emitted by human activities in the United States was CO_2, representing approximately 81.6% of total greenhouse gas emissions. Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 93.5% of the GHG emissions.

State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based upon the 2000-2016 greenhouse gas emissions inventory, California emitted 429.4 $MMTCO_2e$ including emissions resulting from imported electrical power in 2015.

4.8.2.4 Greenhouse Gases

Emissions of carbon dioxide, methane, and nitrous oxide were evaluated because these gasses are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these 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.

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, air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is

unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up).

There are no 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%). Other sources include: evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

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.

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%. 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.

Methane: Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. No health effects are known to occur from exposure to methane.

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.

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 brain damage.

Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 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.

Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane 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.

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 will remain in the atmosphere for over 100 years.

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, HFC-134a, and HFC-152a. Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt. No health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants.

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. The U.S. EPA estimates that concentrations of CF_4 in the atmosphere are over 70 ppt.

No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride: Sulfur hexafluoride is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest global warming potential (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.

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.

Greenhouse gases have varying 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.

The atmospheric lifetime and GWP of selected greenhouse gases are summarized at **Table 4.8-2, *Global Warming Potential and Atmospheric Lifetime of Select GHGs***, below. As shown in **Table 4.8-2**, GWP for the Second Assessment Report, 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 4th Assessment Report range from 1 for carbon dioxide to 22,800 for sulfur hexafluoride.

Table 4.8-2
Global Warming Potential and Atmospheric Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)	
		Second Assessment Report (SAR)	4th Assessment Report (AR4)
Carbon Dioxide	50-200	1	1
Methane	12 ± 3	21	25
Nitrous Oxide	120	310	298
HFC-23	264	11,700	14,800
HFC-134a	14.6	1,300	1,430
HFC-152a	1.5	140	124
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range (3-5.5°F) to 75 to 85% under the medium warming range (5.5-8°F). In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario (8-10.5°F), there could be up to 100 more days per year with temperatures above 90ºF in Los Angeles and 95ºF in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If 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%. 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.

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.

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% of the water supply they need. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate O_3 pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, 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% due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% 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.

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 salt water, 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.

4.8.2.5 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 proposed 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 will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas. **Figure 4.8-1, *Summary of Projected Global Warming Impact***, presents the potential impacts of global warming.

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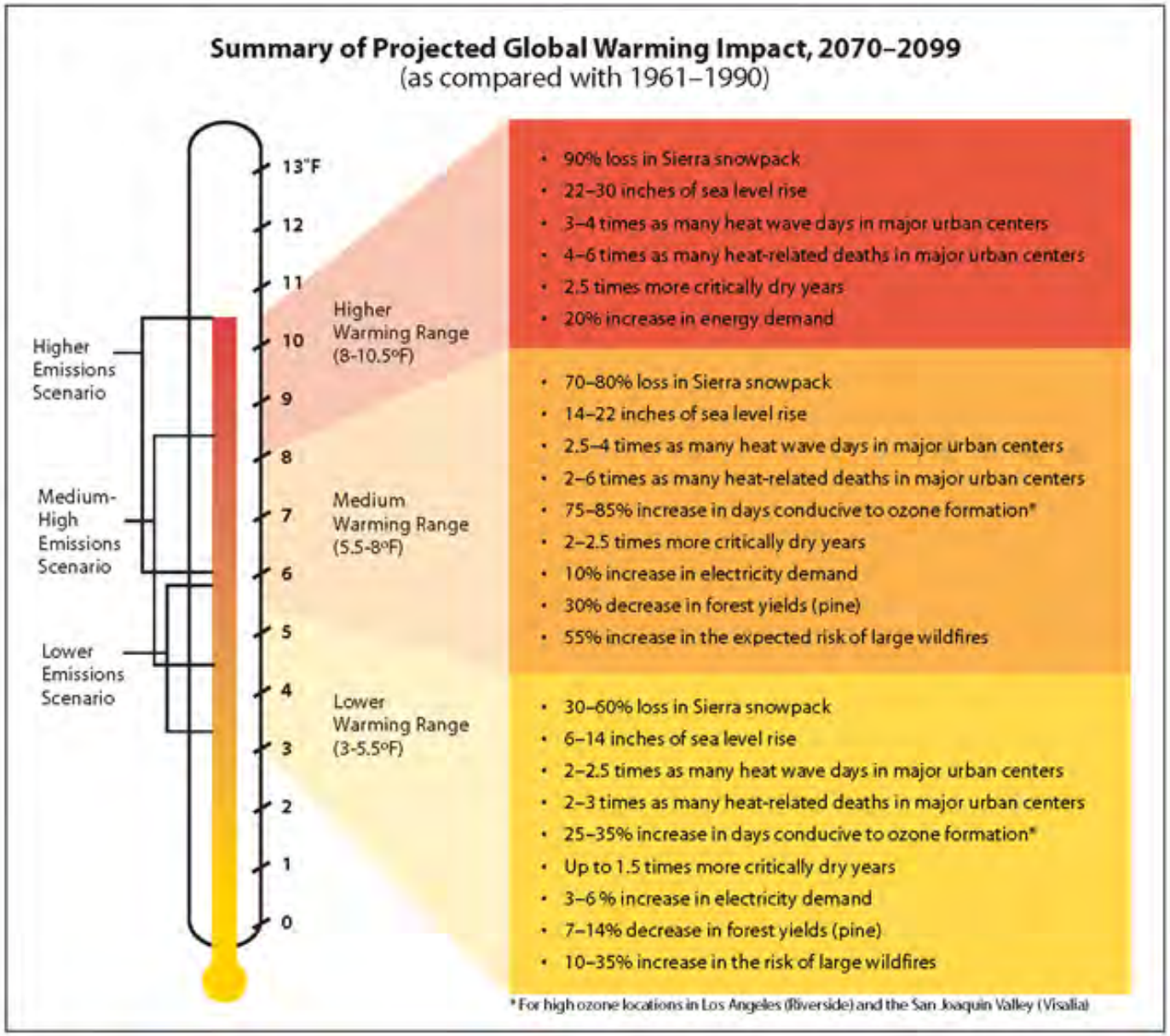
FIGURE 4.8-1
SUMMARY OF PROJECTED GLOBAL WARMING IMPACT



Source: GHG Report (**Appendix G**)

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Specific health effects associated with directly emitted GHG emissions are as follows:

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.

Carbon Dioxide: According to the National Institute for Occupational Safety and Health 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 parts per million (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.

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.

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.

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.

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.

4.8.2.6 Regulatory Setting

International

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention). On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and

adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

International Climate Change Treaties. The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;

- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.

National

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment. In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (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:

- 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.
- 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.

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.

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.

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.

California

Legislative Actions to Reduce GHGs. The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark Assembly Bill (AB 32) California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "GHGs" as defined under AB 32 include carbon dioxide, methane, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The California Air Resources Board (ARB) is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> "*Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.*"

ARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007. Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations. At that level, a 28.4% reduction was required to achieve the 427 million $MTCO_2e$ 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 million $MTCO_2e$. Therefore, under the updated forecast, a 21.7% reduction

from BAU is required to achieve 1990 levels.

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05 (discussed below). The progress is shown in updated emission inventories prepared by ARB for 2000 through 2012. The State has achieved the 2010 target of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 million $MTCO_2e$ (AB 32 2020 target)
- 2000: 463 million $MTCO_2e$ (an average 8 % reduction needed to achieve 1990 base)
- 2010: 450 million $MTCO_2e$ (an average 5 % reduction needed to achieve 1990 base)

ARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, ARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4% and the latest reduction from 2020 BAU is 21.7%.

- 2020: 545 million $MTCO_2e$ BAU (21.7% reduction from BAU to achieve 1990 base)

ARB Scoping Plan. ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33%;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 % below 1990 levels by 2050.

The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities Climate for the next several years. The Update does not set new targets for the State but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80% below 1990 levels by 2050.

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 (as required by AB 32). The no-action scenario is known as "business-as-usual" or BAU. The ARB originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Scoping Plan.

As part of CEQA compliance for the Scoping Plan, ARB prepared a Supplemental Functional Equivalent Document (FED) in 2011. The FED included an updated 2020 BAU emissions inventory projection based on current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. ARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006–2008. The new BAU estimate includes emission reductions for the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the Low Carbon Fuels Standard. In addition, ARB factored into the 2020 BAU inventory emissions reductions associated with 33 % Renewable Energy Portfolio Standard (RPS) for electricity generation. The updated BAU estimate of 507 $MMTCO_2e$ by 2020 requires a reduction of 80 $MMTCO_2e$, or a 16% reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 $MMTCO_2e$) by 2020.

In order to provide a BAU reduction that is consistent with the original definition in the Scoping Plan and with threshold definitions used in thresholds adopted by lead agencies for CEQA purposes and many climate action plans, the updated inventory without regulations was also included in the Supplemental FED. The ARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated ARB 2020 BAU projection in the Supplemental FED is 545 $MMTCO_2e$. Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, ARB estimates a 21.7% reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 $MMTCO_2e$) by 2020, instead of the approximate 28.4% BAU reduction previously reported under the original Climate Change Scoping Plan.

2017 Climate Change Scoping Plan Update

In November 2017, ARB released the final 2017 Scoping Plan Update, which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40% reduction below 1990 levels codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes.

The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts to tighten emission limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydroflurocarbon emissions by 40 % and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by ARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 $MTCO_2e$ per year, "indicating that existing state policies will likely allow California to

meet its target [of 2020 levels under AB 32]." CALGAPS also showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year, indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 % below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Though the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050.

Senate Bill 32. On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion 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 GHG reduction target of 80 % below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that ARB is not only respond to the Governor, but also the Legislature.

SB 375 - the Sustainable Communities and Climate Protection Act of 2008. Passing the Senate on August 30, 2008, SB 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 % of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

- Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the GHG emission reduction targets.
- Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
- Incorporates the mitigation measures required by an applicable prior environmental document.

AB 1493 – the Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in about a 22% reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30% reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs.

These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

Senate Bill 350— the Clean Energy and Pollution Reduction Act of 2015. In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the California Energy Commission (CEC), and local publicly-owned utilities.
- Reorganize the Independent System Operator to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order (EO) S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through EO S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 % below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because

this is an executive order, the goals are not legally enforceable for local governments or the private sector.

EO S-01-07 – Low Carbon Fuel Standard (LCFS). The Governor signed EO S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. In particular, the Executive Order established a LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against ARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing ARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that Low Carbon Fuel Standards adopted by ARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal in California ruled ARB failed to comply with CEQA and the Administrative Procedure Act when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of ARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, ARB was required to bring a new LCFS regulation to tits Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity (low-CI) fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The second public hearing was held on September 24 and September 25, 2015, where the LCFS Regulation was adopted. The Final Rulemaking Package adopting the regulation was filed with Office of Administrative Law (OAL) on October 2, 2015. OAL had until November 16, 2015 to make a determination.

EO S-13-08. EO S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

EO B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to

establish a California GHG reduction target of 40% below 1990 levels by 2030. The Order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 % below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2 equivalent ($MMCO_2e$). The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with EO S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Standards. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

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 newest 2016 version of Title 24 was adopted by the CEC and became effective on January 1, 2017.

The CEC indicates that the 2016 Title 24 standards will reduce energy consumption by 5% for nonresidential buildings above that achieved by the 2013 Title 24.

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 CALGreen 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 50% diversion requirement. The CALGreen

standards also provide exemptions for areas not served by construction and demolition recycling infrastructure. The CALGreen Standards provide the minimum standard that buildings must meet to be certified for occupancy, which is generally enforced by the local building official. CALGreen requires:

- 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% of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.
- Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5% of tenant-occupied motorized vehicle parking capacity, with a minimum of one space.
- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles.
- 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.
- Construction waste. A minimum 65% diversion of construction and demolition waste from landfills, increasing voluntarily to 80% for new homes and commercial projects. All (100%) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
  - The installation of water-conserving fixtures or
  - Using nonpotable water systems.
- Water use savings. 20% mandatory reduction of indoor water use with voluntary goal standards for 30, 35 and 40% reductions.
- 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.
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas.
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.
- 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.

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881, the Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 % consistent with 2020 mandate are expected upon compliance with the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 directed Department of Water Resources to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015 effective December 15, 2015. New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems;
- Incentives for graywater usage;

- Improvements in on-site stormwater capture;
- Limiting the portion of landscapes that can be planted with high water use plants; and
- Reporting requirements for local agencies.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code, which states:

> "*The Office of Planning and Research shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.*"

On April 13, 2009, the Office of Planning and Research submitted to the Secretary for Natural Resources its recommended amendments to the CEQA Guidelines for addressing GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. Following a 55-day public comment period and two public hearings, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments. The Natural Resources Agency transmitted the adopted amendments and the entire rulemaking file to the OAL on December 31, 2009. On February 16, 2010, the OAL approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. However, little guidance is offered on the crucial next step in this assessment process—how to determine whether the project's estimated GHG emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of GHG Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable. In addition, Appendix F of the CEQA Guidelines focuses on Energy Conservation.

Regional

The project is within the Southern California Air Basin (SoCAB), which is under the jurisdiction of the SCAQMD.

South Coast Air Quality Management District. SCAQMD is the agency responsible for air quality planning and regulation in the SoCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SoCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
  - Residential and Commercial land use: 3,000 $MTCO_2e$ per year.
  - Based on land use type: residential: 3,500 $MTCO_2e$ per year; commercial: 1,400 $MTCO_2e$ per year; or mixed use: 3,000 $MTCO_2e$ per year.
- Tier 4 has the following options:
  - Option 1: Reduce BAU emissions by a certain percentage; this percentage is currently undefined.
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures.
  - Option 3, 2020 target for Service Population, including residents and employees is 4.8 $MTCO_2e$/Service Population/year for projects and 6.6 $MTCO_2e$/Service Population/year for plans.
  - Option 3, 2035 target: 3.0 $MTCO_2e$/SP/year for projects and 4.1 $MTCO_2e$/SP/year for plans.
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the year 2050 goal as the basis for the Tier 3 screening

level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

4.8.2.7 County of Riverside Climate Action Plan (CAP)

The County of Riverside adopted the Climate Action Plan (CAP) in December 8, 2015. The CAP was designed under the premise that the County of Riverside, and the community it represents, is uniquely capable of addressing emissions associated with sources under Riverside County's jurisdiction, and that Riverside County's emission reduction efforts should coordinate with the state strategies of reducing emissions in order to accomplish these reductions in an efficient and cost-effective manner.

In order to meet the State's GHG reduction targets, the CAP is subject to continuous monitoring, review, and updates. On July 2018, the County of Riverside has amended the previously adopted 2015 CAP.

According to the *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**), the County of Riverside Climate Action Plan Update, November 2019 (CAP Update) establishes GHG emission reduction programs and regulations that correlate with and support evolving State GHG emissions reduction goals and strategies. The CAP Update includes reduction targets for year 2030 and year 2050. These reduction targets require the County to reduce emissions by at least 525,511 MT CO_2e below the Adjusted Business As Usual (ABAU)[1] scenario by 2030 and at least 2,982,948 MT CO_2e below the ABAU scenario by 2050 (CAP Update, p.7-1).

To evaluate consistency with the CAP Update, the County has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation or project design features (collectively "features") are assigned point values that correspond to the minimum GHG emissions

[1] Adjusted Business As Usual (ABAU) Scenario reflects GHG emissions reductions achieved through anticipated future State actions (CAP Update, p. 2-1).

reduction that would result from each feature. Projects that yield at least 100 points are considered to be consistent with the GHG emissions reduction quantities anticipated in the County's GHG Technical Report and support the GHG emissions reduction targets established under the CAP Update. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases would be considered less-than- significant.

Pursuant to **Mitigation Measure MM-GHG-1**, the Project final plans and designs would conform to provisions of the CAP Update through implementation of the Screening Table Measures.

4.8.2.8 General Plan Policies Regarding Climate Change

The following are applicable General Plan Policies regarding climate change:

- **Policy AQ 18.2** Adopt GHG emissions reduction targets. Pursuant to the results of the Carbon Inventory and Greenhouse Gas Analysis for Riverside County, future development proposed as a discretionary project pursuant to the General Plan shall achieve a greenhouse gas emissions reduction of 25% compared to BAU project in order to be found consistent with the CAP.
- **Policy AQ 19.3** Require new development projects subject to County discretionary approval to achieve the greenhouse gas reduction targets established in the CAP either through: a. Garnishing 100 points through the Implementation Measures found the County's CAP; or b. Requiring quantification of project specific GHG emissions and reduction of GHG emissions to, at minimum, the applicable GHG reduction threshold established in the CAP.
- **Policy AQ 19.4** All discretionary project proposals shall analyze their project-specific GHG reduction targets in comparison to the BAU scenario for the development's operational life and the "operational life" of a new development shall be defined as a 30-year span. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. Alternatively, a project may use the CAP Screening Tables to show the attainment of the applicable number of points needed to ensure adequate GHG reductions and CAP compliance.
- **Policy AQ 20.3** Reduce vehicle miles travelled (VMT) and GHG emissions by improving circulation network efficiency.
- **Policy AQ 20.21** Provide homeowner education programs on the various voluntary ways in which they may reduce their homes' GHG emissions, e.g., improving home insulation, adding solar energy capabilities, and providing information on energy saving landscaping techniques.
- **Policy AQ 20.26** Voluntary GHG reduction objectives for the community sector shall be achieved through development and implementation of specific implementation measures, as determined appropriate and feasible by the County.
- **Policy AQ 21.1** The County shall require new development projects subject to County discretionary approval to incorporate measures to achieve 100 points through incorporation of the Implementation Measures (IMs) found in the Screening Tables within the CAP. One hundred points represent a project's fare-share of reduction in operational emissions associated with the developed use needed to reduce emissions down to the CAP Reduction Target.
  a. This reduction shall be measured in comparison to the "business as usual" (BAU) scenario for the development's operational life. The BAU scenario shall be consistent

with the General Plan build out assumptions detailed in Appendix E-1 of the General Plan.

b. For the purposes of this policy, the "operational life" of a new development shall be defined as a 30-year span with construction emissions amortized over the 30 years.

c. For the purposes of this policy, "new development" refers to private development occurring pursuant to a discretionary land use approval issued by the County of Riverside and subject to binding Conditions of Approval. This definition generally corresponds to projects found non-exempt pursuant to the California Environmental Quality Act (CEQA) but is nevertheless subject to the sole discretion of the County of Riverside as lead agency.

d. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. That is, reductions must not be illusory "paper" reductions achieved merely through baseline manipulation. e. Nothing in this policy shall be construed as accepting any proposed discretionary project from any legally applicable CEQA requirements or explicitly limiting the scope any analyses required to show CEQA compliance.

- **Policy AQ 21.3** Discretionary Measures - Because of the varied nature of the private development proposals reviewed by the County, in some cases, the Implementing Measures in the CAP may not provide the most appropriate means for achieving the required Interim GHG reductions. In such cases, the following alternate measures may be utilized, at the County's discretion:
  a. For large-scale developments, such as specific plans, business parks, industrial centers, and those triggering a full Environmental Impact Report, a custom GHG analyses may be warranted to both assure compliance with the applicable targets herein and to provide a customized array of appropriate reduction measures.
  b. In such cases, the resultant GHG analysis may be used to develop customized GHG reduction measures in place of the CAP's Implementing Measures, provided they achieve the stated targets or implement all feasible mitigation short of achieving the applicable targets.
  c. Project-specific analysis may be particularly valuable when assessing large-scale mixed-use developments. In such developments, significant energy efficiencies and VMT reductions can result from smart growth design features, such as provision of housing, jobs, services and recreation within a 5- to 10-minute walking radius. Project-specific analysis in these cases may result in the need for fewer add-on Implementing Measures and potentially yield substantial savings on construction costs.
- **Policy AQ 21.4** Implementation of the Climate Action Plan (CAP) and monitoring progress toward the CAP reduction targets shall include the ability to expand upon or, where appropriate, update or replace the Implementation Measures established herein such that the implementation of the CAP accomplishes the County's GHG reduction targets.

4.8.3 Thresholds of Significance

As discussed in Section 4.8.1, the Project impacts to two (2) criteria pertaining to Greenhouse Gas Emissions will be analyzed. According to the IS, the Project would have a significant impact if it would:

20. Greenhouse Gas Emissions.

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?

Consistent with the CAP, projects that garner at least 100 points (equivalent to an approximate 15% reduction in GHG emissions) are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report, and consequently would be consistent with the CAP. As such, projects that achieve a total of 100 points or more do not require quantification of project specific GHG emissions and, consistent with CEQA Guidelines, such projects are considered to have a less than significant individual and cumulative impact on GHG emissions.
The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the County's IS. The potential greenhouse gas emissions changes in the environment are addressed in response to the above thresholds in the following analysis.

4.8.4 Potential Impacts

Environmental impacts and mitigation measures detailed in this subchapter do not relate to maintenance of flood control facilities. This type of maintenance occurs infrequently, and impacts to air quality are less than significant, no mitigation is required.

THRESHOLD 20.a: Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant with Mitigation Incorporated

Project Related Greenhouse Gas Emissions

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 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 pollutant (NO_x, VOC, PM_{10}, $PM_{2.5}$, SO_x, and CO) 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™ was used to determine construction and operational air quality emissions.

Construction and Operational Life-Cycle Analysis

A full life-cycle analysis (LCA) for construction and operational activity was not included in the *GHG 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.

Construction Emissions

Construction activities associated with the proposed Project will result in emissions of CO_2 and CH_4 from construction activities. The *Air Quality Analysis* 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 the 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.

Operational Emissions

Operational activities associated with the proposed Project will result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions;
- Energy Source Emissions;
- Mobile Source Emissions;
- Solid Waste; and
- Water Supply, Treatment and Distribution.

Area Source Emissions

- *Hearths/Fireplaces*

GHG emissions would result from the combustion of wood or biomass and are considered biogenic emissions of CO_2. The emissions associated with 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.

- *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.

Energy Source Emissions

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. 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.

Mobile Source Emissions

GHG emissions will also result from mobile sources associated with the Project. These mobile source emissions will result from the typical daily operation of motor vehicles by visitors, employees, and residents. Project mobile source emissions are dependent on both overall daily vehicle trip generation.

Solid Waste

Residential land uses will result in the generation and disposal of solid waste. A large percentage of this waste will 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 will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. CalEEmod default parameters were used to estimate GHG emissions associated with the disposal of solid waste for the Project scenario.

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. CalEEMod default parameters were used to estimate GHG emissions associated with water supply, treatment and distribution for the Project scenario

Emissions Summary

Phase 1

The Project will result in approximately 2,014.44 $MTCO_2e$ per year from construction, area, energy, waste, and water usage during Phase 1. In addition, the Project has the potential to result in an additional 4,737.75 $MTCO_2e$ per year from mobile sources if the assumption is made that all of the vehicle trips to and from the Project are "new" trips resulting from the development of the Project. As such, the Project has the potential to generate a total of approximately 6,752.14 $MTCO_2e$ per year during Phase 1 as summarized on **Table 4.8-3, *Phase 1 Project Greenhouse Gas Emissions (Annual)***.

Table 4.8-3
Phase 1 Project Greenhouse Gas Emissions (Annual)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	147.06	0.03	0.00	147.71
Area	81.46	0.01	0.00	82.05
Energy	1,397.97	0.05	0.02	1,404.19
Mobile Sources	4,731.74	0.024	0.00	4,737.75
Waste	75.63	4.47	0.00	187.37
Water Usage	172.92	0.68	0.02	195.07
Total CO_2E (All Sources)	**6,752.14**			

Phase 1 and Phase 2

The Project will result in approximately 3,423.33 $MTCO_2e$ per year from construction, area, energy, waste, and water usage during Phase 1 and Phase 2. In addition, the Project has the potential to result in an additional 8,568.25 $MTCO_2e$ per year from mobile sources if the assumption is made that all of the vehicle trips to and from the Project are "new" trips resulting from the development of the Project. As such, the Project has the potential to generate a total of approximately 11,991.58 $MTCO_2e$ per year during Project Buildout as summarized on **Table 4.8-4, *Phase 1 and Phase 2 Project Greenhouse Gas Emissions (Annual).***

Table 4.8-4
Phases 1 and 2 Project Greenhouse Gas Emissions (Annual)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	67.81	0.01	0.00	68.16
Area	147.51	0.01	0.00	148.56
Energy	2,531.33	0.08	0.03	2,542.60
Mobile Sources	8,557.39	0.43	0.00	8,568.25
Waste	136.80	8.08	0.00	338.92
Water Usage	284.07	1.23	0.03	325.09
Total CO_2E (All Sources)	**11,991.58**			

Construction emissions associated with Off-Site Project Components would occur as part of the Project. Channel, sewer line, and lift station improvements would occur outside of the Project boundary. Although a specific schedule of off-site utility and infrastructure improvements is unknown, the impacts associated with these expected activities are not expected to exceed the daily emission quantities identified for Project-related construction activities. As such, impacts

associated with off-site utility improvements would be nominal. The *GHG Analysis* was conservative and anticipated operation of several pieces of equipment that would be operating at any given time period, during Off-site Project Components, the disturbance areas would be limited and less than what is evaluated for the Residential Project site.

Notwithstanding, an individual project cannot generate enough GHG emissions to influence global climate change. The Project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs, which when taken together may have a significant impact on global climate change. Because the County's CAP addresses GHG emissions reduction, is in concert with AB 32, SB 32, and international efforts to address global climate change, and includes specific local requirements that will substantially lessen the cumulative problem, compliance with the CAP fulfills the description of mitigation found in CEQA Guidelines §15130(a)(3) and §15183.5. The Project's incremental contribution to GHG emissions impacts would therefore not be cumulatively considerable.

After a review of the screening tables, it has been determined that the Project would garner a minimum of 100 points and thus the Project would be consistent with the CAP. Table 1, CAP Update Consistency of the *Supplemental Air Quality and Greenhouse Gas Assessment* includes a copy of the Screening Tables and illustrates that the Project would garner a minimum of 100 points. **Mitigation Measure MM-GHG-1** has been included which specifies the measures to be provided by the Project to garner the 100 points. It should be noted that **Mitigation Measure MM-GHG-1** has been written in a manner to provide specific measures; however, it also allows flexibility to allow for changes that evolve as part of refinements to the CAP, or changes in technology. Regardless of the final methodology/measures, the Project shall garner the equivalent of 100 points. With the incorporation of **Mitigation Measure MM-GHG-1**, the Project will not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts will be reduced to a less than significant level.

THRESHOLD 20.b: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Less Than Significant with Mitigation Incorporated

Please reference the discussion in Threshold 20.a, above. The applicable plan adopted for the purpose of reducing the emissions of GHGs is the County of Riverside Climate Action Plan (CAP). Consistent with the County of Riverside CAP, projects that garner at least 100 points (equivalent to an approximate 15% reduction in GHG emissions) are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report, and consequently would be consistent with the CAP. The Riverside Climate Action Plan (July 2017) Greenhouse Gas Emissions Screening Tables (Appendix F to the Climate Action Plan) was used to determine if the Project would be consistent with the CAP.

After a review of the screening tables, it has been determined that the Project would garner a minimum of 100 points and thus the Project would be consistent with the CAP. Appendix 3.2 of the *GHG Analysis* includes a copy of the Screening Tables and illustrates that the Project would garner a minimum of 100 points. **Mitigation Measure MM-GHG-1** has been included which specifies the measures to be provided by the Project to garner the 100 points. It should be noted that **MM-GHG-1** has been written in a manner to provide specific measures; however, it

also allows flexibility to allow for changes that evolve as part of refinements to the CAP, or changes in technology. Regardless of the final methodology/measures, the Project shall garner the equivalent of 100 points. With the incorporation of **Mitigation Measure MM-GHG-1**, the Project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts will be reduced to a less than significant level.

4.8.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Condition SC-GHG-1, below, will be required in order to reduce the Project's GHG emissions. This is a standard condition and is not unique to this Project.

SC-GHG-1 The Project is required to comply with Title 24, Part 6 (Energy Efficiency Standards or California Energy Code), as well as Title 24, Part 11 (California Green Building Standards Code - referred to as CalGreen).

Mitigation Measure(s)

Because the Project will result in GHG emissions, **MM-GHG-1**, below, is provided to reduce potential adverse GHG impacts to a less than significant level:

MM-GHG-1 Prior to issuance of each building permit, the Project Applicant shall provide documentation to the County of Riverside Building Department demonstrating that the improvements and/or buildings subject to each building permit application include the following measures from the County of Riverside Climate Action Plan (November 2019) Greenhouse Gas Emissions Screening Tables (Appendix F to the Climate Action Plan), as needed to achieve the required 100 points. Alternatively, the specific measures may be substituted for other measures, so long as 100 points are still achieved on the checklist, subject to County of Riverside Building Department review:

1. **Measure EE5.A.1 Insulation - Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) (9 points)**
2. **Measure EE5.A.2 Windows - Enhanced Window (0.32 U-factor, 0.25 SHGC) (4 points)**
3. **Measure EE5.A.3 Cool Roofs - Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) (7 points)**
4. **Measure EE5.A.4 Air Infiltration - Blower Door HERS Verified Envelope Leakage or equivalent (5 points)**
5. **Measure EE5.B.1 Heating/Cooling Distribution System - Modest Duct Insulation (R-6) (4 points)**

6. **Measure EE5.B.2 Space Heating/Cooling Equipment - Very High Efficiency HVAC (SEER 16/82% AFUE or 9 HSPF) (5 points)**
7. **Measure EE5.B.3 Water Heaters - Very High Efficiency Water Heater (0.92 Energy Factor) (11 points)**
8. **Measure EE5.B.5 Artificial Lighting - High Efficiency Lights (50% of in-unit fixtures are high efficiency) (6 points)**
9. **Measure EE5.B.6 Appliances - Energy Star Refrigerator (new) Energy Star Dishwasher (new) Energy Star Washing Machine (new) (3 points)**
10. **Measure CE1.A.1 Photovoltaic - 50 percent of the power needs of the Project (17 points)**
11. **Measure W2.A.2 Water Efficient Landscaping - Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use) (2 points)**
12. **Measure W2.B.1 Showers - Water Efficient Showerheads (2.0 gpm) (2 points)**
13. **Measure W2.B.2 Toilets - Water Efficient Toilets (1.5 gpm) (2 points)**
14. **Measure W2.B.3 Faucets - Water Efficient faucets (1.28 gpm) (2 points)**
15. **Measure W2.B.4 Dishwasher - Water Efficient Dishwasher (6 gallons per cycle or less) (1 points)**
16. **Measure W2.B.5 Washing Machine - Water Efficient Washing Machine (Water factor <5.5) (1 points)**
17. **Measure W2.B.6 WaterSense - EPA WaterSense Certification (7 points)**
18. **Measure T4.A.1 Electric Vehicle Recharging - Install electric vehicle charging stations for each residential unit included in the Project. Projects that include charging stations for fewer than all units shall receive points on a proportional basis. (8 points)**
19. **Measure S1.A.1 Recycling - Provide green waste composting bins at each residential unit (4 points)**

4.8.6 Cumulative Impacts

GHG emissions are assumed to be cumulative. An individual project, such as the proposed Project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate.

However, the proposed Project may contribute to global climate change by its incremental contribution of greenhouse gases. With implementation of **Standard Condition SC-GHG-1** and **Mitigation Measure MM-GHG-1**, emission rates will be consistent with applicable significance thresholds established by the CAP. With implementation of these mitigation measures, impacts would be reduced to a less than significant level.

Thus, the proposed Project would not result in significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts with implementation of the mitigation measures. Project-related GHG emissions are not considered to be cumulatively considerable and would not result in a significant impact on global climate change.

4.8.7 Unavoidable Significant Adverse Impacts

As stated above, an individual project such as the proposed Project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the

proposed Project may contribute to global climate change by its incremental contribution of greenhouse gasses.

With implementation of **Standard Condition SC-GHG-1** and **Mitigation Measure MM-GHG-1**, emission rates will be consistent with applicable significance thresholds emission rates will be consistent with applicable significance thresholds established by the CAP. With implementation of these mitigation measures, impacts would be reduced to a less than significant level. Project-related GHG emissions are not considered to be significant or adverse and will not result in an unavoidable significant adverse impact on global climate change.

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4.9 HAZARDS AND HAZARDOUS MATERIALS

4.9.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of hazards and hazardous materials from implementation of the Project. The Hazards and Hazardous Materials Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

21. Hazards and Hazardous Materials.
- 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. Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?
- d. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- e. 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?

22. Airports.
- a. Result in an inconsistency with an Airport Master Plan?
- b. Require review by the Airport Land Use Commission?
- c. 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 for people residing or working in the Project area?
- d. For a project within the vicinity of a private airstrip, or heliport, would the Project result in a safety hazard for people residing or working in the Project area?

23. Hazardous Fire Area.
- a. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 21.c through 23.a, related to hazards and hazardous materials (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified either a "no impact" or "less than significant impact," to those issue areas, as a result of implementation of the Project.

Based on the analysis in the IS, the remaining two (2) issue areas 21.a and 21.b, related to hazards and hazardous materials in the questions asked above, **would** be further analyzed in

the DEIR.

Standard Conditions SC-HYD-1 (Best Management Practices), **SC-HYD-2** (Water Quality Management Plan), **SC-TR-2** (Traffic Control Plan), **SC-HAZ-1** (Ordinance No. 787), and **SC-PS-1** (development impact fees) have been carried over to this DEIR from the IS.

There were no mitigation measures presented in the IS to be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *Phase I Environmental Site Assessment for Tract 37439 and Channel Improvement, APNs 466120019, 466120002, 466120022, 466310026, and 466310002, SE of Briggs Rd. and Holland Rd., Winchester, CA 92596*, prepared by RMA GeoScience, March 5, 2018 (*Phase I ESA*, **Appendix H1**)
- *Additional Chemical Testing for Tract 37439, APNs 466310026, and 466310002, SE of Briggs Rd. and Holland Rd., Winchester, CA 92596*, prepared by RMA GeoScience, September 11, 2018 (*ACT*, **Appendix H2**)
- *Phase I Environmental Site Assessment for Northwest Corner of APN 354200007, 30605 Briggs Road, Menifee, CA 92596*, prepared by RMA GeoScience, March 29, 2018 (*Phase I ESA NWC*, **Appendix H3**)
- *Riverside County General Plan*
  https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- CAL FIRE website
  http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_faqs#sra01
- United States Environmental Protection Agency Web site
  https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding hazards and hazardous materials were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 21.a. and 21.b. are the focus of the following evaluation of hazards and hazardous materials.

All the Tables and Figures in this Subchapter are from the *Phase I ESA*, *ACT*, or *Phase I ESA NWC*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical studies, which are provided in Volume 2 of the DEIR, the Technical Appendices.

4.9.2 Environmental Setting

4.9.2.1 Project Site and Surroundings

The Project is located in unincorporated Riverside County, California east of the City of Menifee. The Project area is separated from the coastline approximately 34 miles across the Santa Ana Mountain range. Regional access to the area is provided to the general area in a north-south direction by the Interstate 215 (I-215) freeway and by Highway 79, and State Route 74 in an east-west direction.

The Project area is located in the eastern portion of the Menifee Valley, one of the many tectonically controlled valleys within the valley-and-ridge systems found in the Perris Block. These structurally depressed troughs are filled with non-marine sediments of upper Pliocene through Recent age, while the ridges are typically composed of plutonic igneous rocks, metasedimentary rocks, and late-stage intrusive dikes.

The Perris Block is defined as a region between the San Jacinto and Elsinore-Chino fault zones, bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley. It is considered to have been active since Pliocene time. The Project area lies across the level valley floor, away from the flanks of any of the ridge systems. In this area, the valley trends nearly east-west and is likely to be more erosional than tectonic in origin.

Residential Project Site Components

The Residential Project site consists of a generally square-shaped tract of agricultural land in Assessor's Parcel Numbers (APN) 466-310-002 and -026, bounded by Holland Road on the north, Eucalyptus Road on the east, Craig Avenue on the south, and Leon Road on the west. The Project site is approximately 158.18 gross acres. The terrain is generally level, with elevations ranging between approximately 1,425 feet and 1,440 feet above mean sea level (AMSL). Portions of the agricultural fields at the main Project site are planted in such crops as potatoes and cilantro. The field to the west of Leon Road, where the flood-control channel right-of-way lies, is currently used for cattle grazing.

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads and single family residential land uses.

Off-Site Project Components

The site of the proposed offsite trapezoidal earthen drainage channel (Holland Channel) lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed offsite trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Southshore Drive to the west. The proposed trapezoidal earthen drainage channel bounded at east by Le Eucalyptus on Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Southshore Drive. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the Holland Road, Briggs Road, and Tres Lagos Road ROWs. All three of these roadways have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. The Holland Road off-site roadway improvements will also be located within the existing ROW. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

4.9.2.2 Historical Site Usage

Aerial Photograph Review

Note: Please see the Enclosures at the rear of the Phase I ESA for the aerial photographs and quadrangle maps for the Project site and surrounding properties that are referenced below.

Aerial photographs for the years dated 1938, 1949, 1953, 1961, 1967, 1978, 1985, 1989, 1996, 2002, 2005, 2006, 2009, 2010, and 2012 were utilized in the *Phase I ESA* for the site historic review. From 1938 through 2012 (and 2016), the parcels comprising the proposed Project were with vacant, or engaged in agricultural use (farming).

Topographic Map Review

The Elsinore Quadrangle (30-minute series), dated 1901; the Murrieta Quadrangle (15-minute series), dated 1942; the Murrieta Quadrangle (15-minute series), dated 1943; the Romoland and Winchester Quadrangles (7.5-minute series), dated 1953; the Romoland and Winchester Quadrangles (7.5-minute series), dated 1973; the Romoland and Winchester Quadrangles (7.5-minute series), dated 1979; and the Romoland and Winchester Quadrangles (7.5-minute series), dated 2012 indicated that the site was vacant, undeveloped, agricultural land as far back as the earliest aerial photograph in 1938.

4.9.2.3 Existing Regulations and Plans

A number of federal, state, and local laws have been enacted to regulate the management of hazardous materials. Implementation of these laws and management of hazardous materials are regulated independently of the CEQA process through programs administered by various agencies at the federal, state, and local levels. An overview of the key hazardous materials laws and regulations that apply to the any activity that may handle hazardous materials or generate hazardous waste are provided below.

4.9.2.3.a Federal

Several federal agencies regulate hazardous materials. These include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Applicable federal regulations are contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR). In particular, CFR Tile 49 governs the manufacture of packaging and transport containers; packing and repacking, labeling, and the marking of hazardous material transport. Other federal regulations such as the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA), regulate the cleanup of known hazardous waste sites. The referenced agencies keep lists of known sites; these and other lists of known sites with hazardous materials contamination potential are checked to determine if any portion of the Project site has been identified as affected by hazardous wastes.

The EPA is the primary federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the federal level is delegated to state and local environmental regulatory agencies.

In addition, with respect to emergency planning, the Federal Emergency Management Agency (FEMA) is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, state, and local levels. This includes the development of a national capability to mitigate against, prepare for, respond to and recover from a full range of emergencies.

4.9.2.3.b State

Primary state agencies with jurisdiction over hazardous materials management are the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB). The project site is located within the jurisdiction of the Santa Ana RWQCB jurisdiction. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), Office of Emergency Services (OES-California Accidental Release Prevention implementation), Department of Fish and Wildlife (DFW), Air Resources Board (ARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA-Proposition 65 implementation) and the CalRecycle. The enforcement agencies for hazardous materials transportation regulations are the California Highway Patrol (CHP) and Caltrans. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations. In addition, South Coast Air Quality Management District Rules and Regulations pertaining to asbestos abatement (including rule 1403), Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from Title 8 of the California Code of Regulations may be required for any materials discovered during any future soil moving activities that may contain hazardous materials due to prior activities.

California Environmental Protection Agency

The California EPA (Cal/EPA) has broad jurisdiction over hazardous materials management in the state. Within Cal/EPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law.

Along with the DTSC, the RWQCB is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. RWQCB regulations are contained in Title 27 of the California Code of Regulations (CCR). Additional state regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to hazardous materials.

Department of Toxic Substances Control

The DTSC regulates hazardous waste in California primarily under the authority of the Federal Resource Conservation and Recovery Act (RCRA), and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reductions, cleanup, and emergency planning. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. As such, the management of hazardous waste of the nature and quantities which, are regulated that is disposed of, treated, stored, or handled on the Project site would be under regulation by the DTSC to ensure compliance with state and federal requirements pertaining to hazardous waste. California law provides the general framework for regulations of hazardous wastes by the Hazardous Waste Control Law (HWCL) passed in 1972. DTSC is the state's lead agency in implementing the HWCL. The HWCL provides for state regulation of existing hazardous waste facilities, which include "any structure, other appurtenances, and improvements on the land, used for treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous waste," and requires permits for, and inspections of facilities involved in generation and/or treatment, storage and disposal of hazardous wastes.

Hazardous Materials Management Plans

In January 1996, Cal/EPA adopted regulations implementing a "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste on-site treatment, underground storage tanks, above-ground storage tanks, hazardous materials release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency-the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. For the County of Riverside, CUPA jurisdiction is under the Department of Environmental Health Services. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate

on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely. Thus, if any uses proposed as part of the Project would handle, store or use sufficient quantities of hazardous substances on-site that require regulations, they are required to comply with this law.

California Accidental Release Prevention Program (CalARP)

The CalARP program (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than 500 pounds, 55 gallons, or 200 cubic feet of gas of specific regulated substances at their facilities. The CalARP program regulations became effective on January 1, 1997 and include the provisions of the Federal Accidental Release Prevention program (Title 40, CRF Part 68) with certain additions specific to the state pursuant to Article 2, Chapter 6.95, of the Health and Safety Code.

The list of regulated substances is found in Article 8, Section 2770.5 of the CalARP program regulations and include common cleaning products. However, as the minimum quantity that is regulated is 500 pounds or 55 gallons, it is unlikely that the onsite residences will use such quantities.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and companies are to properly train employees.

Hazardous Materials Transportation

The CHP and Caltrans are the enforcement agencies for hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations. The Office of Emergency Services (OES) also provides emergency response services involving hazardous materials incidents.

Investigation and Cleanup of Contaminated Sites

The oversight of hazardous materials release site often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC, local CUPA and RWQCB are the three primary agencies responsible for issues pertaining to hazardous materials release sites. Air quality issues related to remediation and construction at contaminated sites are also subject to federal and state laws and regulations that are administered at the local level.

Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses.

4.9.2.3.c Local

Fire Regulations

Fire codes are important to all building construction. According to *Map My County*, the Project site is located within an area identified as a moderate fire hazard. (The Project site is in a State Responsibility Area. As State responsibility area is a legal term defining the area where the State has financial responsibility for wildland fire protection. Incorporated cities and federal ownership are not included.)

The Project site is served by the Riverside County Fire Department/CAL Fire. The closest station to the Project site is the Riverside County Menifee Lakes Fire Station-76, located at 29950 Menifee Road, Menifee, CA 92584. This station is located approximately 4 miles northwest of the Project site.

The County of Riverside and the Riverside County Fire Department have adopted the California Building Standards Code, which includes the most current version of the California Fire Code and the California Building Code (CBC). The Uniform Fire Code established by the International Fire Code Institute and the Uniform Building Code (UBC) established by the International Conference of Building Officials, both prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection. The Riverside County Fire Department Chief is authorized and directed to enforce the provisions of the California Fire Code throughout the County. The California Fire Code contains standards for access to a site, building design, water supply, storage of hazardous materials and brush clearance. The California Building Code prescribes performance characteristics and materials to be used to achieve acceptable levels of fire protection based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed.

For purposes of this DEIR, whatever fire or building code is current and adopted by the County and County Fire at the time of Project development for the particular issue/regulation being referenced in the DEIR shall be applicable code.

The Riverside County Fire Department Office of the County Fire Marshal (OFM) charges project applicant deposit-based fees, established in Riverside County Ordinance No. 671, for the review and related processing of all planning case applications conducted by the west and east County OFM offices. In addition, development fees are collected to help offset the cost of providing new fire facilities.

General Plan Policies

The County of Riverside General Plan Safety Element includes the following policies relevant to the hazards and hazardous materials.

Policies Related to Fire Hazards

- **Policy S 5.1** Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:
  a. All proposed construction shall meet minimum standards for fire safety as defined in the County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.
  b. In addition to the standards and guidelines of the Uniform Building Code and Uniform Fire Code fire safety provisions, continue additional standards for high- risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not:
  - Impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor
  - Hinder evacuation from fire, including potential blockage of stairways or fire doors.
  c. Proposed development in Hazardous Fire areas shall provide secondary public access, unless determined otherwise by the County Fire Chief.
  d. Proposed development in Hazardous Fire areas shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the County Fire Chief.
- **Policy S 5.6** Ensure coordination between the Fire Department and the Transportation Land Management Agency, Environmental Health Department, and private and public water purveyors to improve fire fighting infrastructure, during implementation of the County's capital improvement programs, by obtaining:
  - Replacement and/or relocation of old cast-iron pipelines and inadequate water mains when street improvements are planned;
  - Assessment of impact fees as a condition of development; and
  - Redundant emergency distribution pipelines in areas of potential ground failure or where determined to be necessary.
- **Policy S 5.8** Periodically review inter-jurisdictional fire response agreements, and improve fire fighting resources as recommended in the County Fire Protection Master Plan to keep pace with development, including construction of additional high-rises, mid-rise business parks, increasing numbers of facilities housing immobile populations, and the risk posed by multiple ignitions, to ensure that:
  - Fire reporting and response times do not exceed those listed in the County Fire Protection Master Plan identified for each of the development densities described;
  - Fire flow requirements (water for fire protection) are consistent with Insurance Service Office recommendations; and
  - The planned deployment and height of aerial ladders and other specialized equipment and apparatus are sufficient for the intensity of development desired.

- **Policy S 5.9** Continue County Fire Department collaboration with the Transportation Land Management Agency (TLMA) to update development guidelines for the urban/wildland interface areas. These guidelines should include increasing the development area to at least 30 feet past the usual boundary.
- **Policy S 5.10** Continue to utilize the Riverside County Fire Protection Master Plan as the base document to implement the goals and objectives of the Safety Element.
- **Policy S 6.1** Enforce the policies and siting criteria and implement the programs identified in the County of Riverside Hazardous Waste Management plan, which includes the following:
  a. Comply with federal and state laws pertaining to the management of hazardous wastes and materials.
  b. Ensure active public participation in hazardous waste and hazardous materials management decisions in Riverside County.
  c. Coordinate hazardous waste facility responsibilities on a regional basis through the Southern California Hazardous Waste Management Authority (SCHWMA).
  d. Encourage and promote the programs, practices, and recommendations contained in the County Hazardous Waste Management Plan, giving the highest waste management priority to the reduction of hazardous waste at is source.
- **Policy S 7.1** Continually strengthen the Multi-Hazard Functional Plan and maintain mutual aid agreements with federal, state, local agencies and the private sector to assist in:
  a. Clearance of debris in the event of widespread slope failures, collapsed buildings or structures, or other circumstances that could result in blocking emergency access or regress;
  b. Heavy search and rescue;
  c. Fire suppression;
  d. Hazardous materials response;
  e. Temporary shelter;
  f. Geologic and engineering needs;
  g. Traffic and crowd control; and
  h. Building inspection.

Policies Related to Emergency Response Plans

- **Policy S 7.2** Encourage the utilization of multilingual staff personnel to assist in evacuation and short-term recovery activities, and meeting general community needs. (AI 97)
- **Policy S 7.4** Use incentives and disincentives to persuade private businesses, consortiums, and neighborhoods to be self-sufficient in an emergency by:
  - Maintaining a fire control plan, including an on-site firefighting capability and volunteer fire response teams to respond to and extinguish small fires; and
  - Identifying medical personnel or local residents who are capable and certified in first aid and CPR.

Policies Related to Hazardous Wastes and Materials

- **Policy S 7.3** Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to:

  - Install automatic fire and hazardous materials detection, reporting and shut-off devices; and
  - Install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.
- **Policy S 7.6** Improve management and emergency dissemination of information using portable computers with geographic information systems and disaster-resistant Internet access, to obtain:
  - Hazardous Materials Disclosure Program Business Plans regarding the location and type of hazardous materials;
  - Real-time information on seismic, geologic, or flood hazards; and
  - The locations of high-occupancy, immobile populations, potentially hazardous building structures, utilities and other lifelines.

4.9.3 Thresholds of Significance

As discussed in Subsection 4.9.1, above, the Project impacts to two (2) criteria pertaining to hazards and hazardous materials will be analyzed. According to the IS, the Project would have a significant impact if it would:

21. Hazards and Hazardous Materials.

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?

The questions posed in the County's IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential hazards and hazardous materials changes in the environment are addressed in response to the above thresholds in the following analysis.

4.9.4 Potential Impacts

THRESHOLD 21.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 with Mitigation Incorporated

Grading Operations

Grading operations have the greatest potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or 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. Potential impacts during future occupancy of the site are addressed in the text below. Air quality hazards

to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment have been discussed in Subchapter 4.4, Air Quality of this DEIR 4.4. The potential impacts anticipated during grading activities are first characterized in a general nature and then described as they relate to the known and identified hazards from the Project.

General Impacts

During construction there are activities that can expose the public to significant hazards from accidental circumstances. The first pathway occurs when petroleum products are accidentally released from construction equipment or storage facilities. For example, vandalism can cause a release from stored fuels, or a hydraulic hose may break on a large piece of construction equipment. This type of impact is readily mitigated by immediately stopping the construction activity; controlling the accidental release; and carrying out remediation of the area contaminated by the spill. **Mitigation Measure MM-HAZ-1** (see Section 4.9.5) is provided below to address the accidental spill circumstance, and with full implementation of this measure, no residual contamination will remain to harm either humans or the environment after an accidental spill.

The second circumstance occurs when unknown contaminants below the ground surface are exposed during construction. An example would be a barrel of hazardous material buried below the ground surface that could be exposed during grading. As in the previous instance, the exposure of such contamination typically occurs over a very limited area and with proper mitigation the potential hazard to humans and the environment can be managed so it will not significantly impact either humans or the environment. **Mitigation Measure MM-HAZ-2** (see Section 4.9.5) is provided to ensure that measures are in place to address accidental exposure of a contaminated location on the Project site during initial ground disturbance.

Both during construction and once the Project is occupied, the transport of hazardous materials (such as petroleum products (gasoline), pesticides/herbicides, and pool chlorine) to the Project site can result in additional potential for accidental spills, leaks, or other hazards such as fire or explosion. The primary routes to the Project site will be Leon Road via Scott Road or Holland Road. For such transporters, the existing regulatory mandates ensure that the hazardous materials and any hazardous wastes transported to and from the Project site will be properly managed. These regulations are codified in Titles 8, 22, and 26 of the California Code of Regulations. For example, maintenance trucks for construction equipment or pool maintenance companies must transport their hazardous materials in appropriate containers, such as tanks or other storage devices. In addition, the haulers must comply with all existing applicable federal, state and local laws and regulations regarding transport, use, disposal, handling and storage of hazardous wastes and material, including storage, collection and disposal. Compliance with these laws and regulations related to transportation of hazardous materials will minimize potential exposure of humans or the environment to significant hazards from transport of such materials and wastes. Thus, the existing regulatory structures already in place are sufficient to control potential hazards and prevent accidents, such that any impacts will remain less than significant. No mitigation is required to ensure that the transport of hazardous materials/wastes

in conjunction with the proposed Project will not cause significant adverse impact to humans or the environment.

Specific Impacts

- Regulatory Database Search

Phase I ESA, *ACT* and *Phase I ESA NWC* reviewed known electronic database listings for possible hazardous waste generating establishments in the vicinity of the Project site, as well as adjacent sites with known environmental concerns. This review encompassed the adjacent and nearby locations for off-site infrastructure improvements. Facilities were identified by county, state, or federal agencies that generate, store, or dispose of hazardous materials. The Project site was not listed on any of the databases reviewed as having environmental concerns. There are no neighboring sites located within a one-mile radius of the site that constitutes a recognized environmental condition with respect to the Project site.

The proposed Project does not include any activities that will routinely use hazardous materials or generate substantial volumes of hazardous waste. **Mitigation Measure MM-HAZ-3** (see Section 4.9.5) will ensure that this Project informs future home owners of the proper method of disposing of household hazardous waste and the programs available in Riverside County to facilitate proper disposal of such material.

- Project Site

1. **Polychlorinated Biphenyls (PCBs).** According to the EPA, PCBs are a group of man-made organic chemicals consisting of carbon, hydrogen and chlorine atoms. The number of chlorine atoms and their location in a PCB molecule determine many of its physical and chemical properties. PCBs have no known taste or smell, and range in consistency from an oil to a waxy solid. PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until manufacturing was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including:

    - Electrical, heat transfer and hydraulic equipment;
    - Plasticizers in paints, plastics and rubber products;
    - Pigments, dyes and carbonless copy paper; and
    - Other industrial applications.

    There is no indication of PCBs identified on the Project site. No impacts will occur.

2. **Underground and Above-Ground Storage Tanks.** No features associated with Above-Ground Storage Tanks (ASTs) or Underground Storage Tanks (USTs) were observed during site reconnaissance. There was no evidence that either of these have existed on the Project site in the past. No records pertaining to fuel USTs were discovered. No impacts

will occur.

3. **Wastewater**. No industrial wastewater exists on-site. A portion of the most northwestern percolation pond that is part of the wastewater treatment system that services the RV Resort is located at the eastern half of the Project site. The treated wastewater from the wastewater treatment system is pumped to the ponds and allowed to percolate into the soil. The ponds are not lined and are designed for infiltration. The system accepts sewage and wastewater from the RVs that visit the Wilderness Lakes RV Resort. According to the EPA domestic sewage and mixtures of domestic sewage is not considered a solid waste. A material cannot be a hazardous waste if it does not meet the definition of solid waste. Depth to groundwater in the area of the site varies from 99 to 109 feet below ground surface. Given that the site will be future location of a sewer lift station, the percolation pond located at the eastern half of the site is not a recognized environmental condition with respect to the Project site. **Mitigation Measure MM-HAZ-4** (see Section 4.9.5) shall be implemented to address any potential impacts from disturbances to this area during grading. The soils can only be used for non-residential fills, shall be tested and remediation performed in accordance with County Department of Environmental Health Services (DEHS) or the Department of Toxic Substances Control (DTSC), as applicable. In addition, grading or soil excavation dust control shall be employed to reduce possible air borne emission of bacteria. The Project will adhere to the requirements for fugitive dust as part of adherence to South Coast Air Quality Management Rule 402. With the implementation of **Mitigation Measure MM-HAZ-4** and Rule 402 (see Subchapter 4.4, Air Quality, Section 4.4.5 of this DEIR) any impacts will remain less than significant.

4. **Septic Systems**. No records were found for the existence of a septic system on the Project site. The potential for septic systems to be located on-site is low. No impacts will occur.

5. **Hazardous Substances or Petroleum Products**. There was no evidence of hazardous substances at the site or petroleum products. Hazardous waste is not generated at the site. There was no evidence of unusually stained soil. No stressed vegetation was observed. Ponds and standing water were observed in places along the three parcels, APNs 466120019, 466120002, and 46610022, and are most likely residual water from the heavy rains that occurred in the beginning of January, 2018. Reference **Figure 3-1, *Assessor's Parcel Map*** (located in Chapter 3 of this DEIR) for the locations of these parcels. No impacts will occur.

6. **Existing or Abandoned Oil and Water Wells**. According to the database maintained by the Department of Oil, Gas, and Geothermal Resources, there are no oil wells located at or in the near vicinity of the Project site. Based on research of federal, state and county water well databases no mapped water wells exist at the Project site. The closest mapped water well (Well 006S003W01L001S) is located to the west of the Project site, approximately 371 feet. Water level data from 1995 shows groundwater at a depth of 99.87 below ground surface. No impacts will occur.

7. Agricultural Chemical Survey. As part of the scope of the *Phase I ESA*, soil samples were collected from random locations in the area planned for the Residential Project site, and

along the area of the planned flood control channel for the Off-site Project Components; as well as the Sewer Lift Station Site.

Residential Project site and Off-site Project Components

Soil samples were and submitted to a laboratory for testing for organochlorine pesticide (OCP) residue. A total of 23 soil samples were collected; 11 from the planned residential development, and 12 from the planned flood control channel. The test results are summarized in **Table 4.9-1, *Phase I ESA Organochlorine Pesticide (OCP) Test Results***, below. The CHHSLs for the detected OCPs are shown in **Table 4.9-2, *Phase I ESA CHHSLs Levels for the Detected OCPs***.

Table 4.9-1
Phase I ESA Organochlorine Pesticide (OCP) Test Results

Sample I.D.	Analytes	Test Results (mg/kg)
S-1	DDE	0.0171
S-2	DDE	0.0106
S-3	DDE	0.0064
S-4	DDE	0.0143
S-5	DDE	0.0106
S-6	DDE	0.0117
S-7	DDE	0.0104
S-8	ND	ND
S-9	ND	ND
S-10	ND	ND
S-11	ND	ND
S-12	ND	ND
S-13	DDE	0.0152
S-14	DDE	0.0304
S-15	DDE	0.0538
S-16	DDE	0.0695
S-17	DDE	0.0194
S-18	DDE	0.0365
S-19	DDE	0.0392
S-20	DDE	0.0302
S-21	DDE	0.0342
S-22	DDE	0.0267
S-23	DDE	0.0273

Table 4.9-2
Phase I ESA CHHSLs Levels for the Detected OCPs

Organic Chemical	CHHSL Levels (mg/kg) (Residential Land Use From Updated Table dated 9/10)
DDE	1.60
DDT	1.60
DDD	2.30

Of the 23 samples collected 18 of them had detectable levels of pesticides. Pesticide residue detected was DDE. All of the detected pesticides exhibited levels well below California Human Health Screening Levels (CHHSLs). The *Phase I ESA* was submitted to DEHS for their review.

Upon review of the *Phase I ESA*, DEHS requested additional chemical testing be completed at the subject parcels on the Residential Project site. DEHS requested that composite soil samples be collected and analyzed in areas of the property where sampling did not occur and be analyzed for arsenic in addition to organochlorine pesticides. Additional testing was not required in the area of the planned flood control channel for the Off-site Project Components.

On August 16, 2018 soil samples were collected at the Project site. Samples were collected in areas not previously sampled in the *Phase I ESA*. A total of 11 composited soil samples were obtained at the Project site. Each composited sample was made up of a maximum of 4 discreet surface samples (compositing factor of 4:1) obtained from adjacent sampling locations. A total of 3 discreet soil samples were collected at the Project site. The approximate location where each sample was collected is shown on **Figure 4.9-1, *Sample Location Map***. The sample locations from the *ACT* are also shown on **Figure 4.9-2, *ACT Sample Location Map***.

FIGURE 4.9-1
SAMPLE LOCATION MAP

Source: Phase I ESA (**Appendix H1**)

FIGURE 4.9-2
ACT SAMPLE LOCATION MAP

Source: ACT(**Appendix H2**)

The samples were collected at depths of 2 to 8 inches below existing grade using hand tools. The hand tools were washed in a solution of phosphate-free detergent and water and double rinsed with clean water after each sample was collected. The soil samples were collected in four-ounce jars provided by the American Scientific Laboratory. The samples were labeled and stored in a cooler packed with ice for transportation to American Scientific Laboratory, a state-certified environmental testing laboratory (ELAP #2200). A copy of the Chain of Custody Record is included with in the *ACT*. All 14 samples were analyzed for OCPs using EPA Method 8081A and arsenic via EPA Method 6010B.

Of the 14 samples collected all had detectable levels of OCPs. OCPs detected consisted of DDE and Chlordane. All of the detected OCPs are *below* California Human Health Screening Levels (CHHSLs) and USEPA Residential Screening Levels (USEPA RSLs) and were consistent with the findings in the *Phase I ESA*. The test results are summarized in **Table 4.9-3, *ACT Organochlorine Pesticide (OCP) Test Results***. The CHHSLs and USEPA RSLs for the detected OCPs are shown in **Table 4.9-4, *ACT CHHSLs and USEPA RSLs for the Detected OCPs***. The laboratory analytical results for the soil samples are included in the *ACT*.

Table 4.9-3
ACT Organochlorine Pesticide (OCP) Test Results

Sample I.D.	Analytes	Test Results (mg/kg)
S-1	DDE	0.014
	Chlordane	0.00637
	Arsenic	0.482
S-2	DDE	0.0138
	Chlordane	0.00274
	Arsenic	0.477
S-3	DDE	0.01614
	Chlordane	0.00388
	Arsenic	0.358
S-4	DDE	0.0216
	Chlordane	0.00563
	Arsenic	0.343
S-5	DDE	0.0233
	Chlordane	0.00570
	Arsenic	0.422
S-6	DDE	0.0188
	Chlordane	0.00509
	Arsenic	0.549
S-7	DDE	0.0136
	Chlordane	0.00237
	Arsenic	0.485
S-8	DDE	0.0189
	Chlordane	0.00336
	Arsenic	0.450
S-9	DDE	0.00419
	Chlordane	0.00240
	Arsenic	0.378
S-10	DDE	0.0273
	Chlordane	0.00619
	Arsenic	0.359
S-11	DDE	0.0134
	Chlordane	0.00378
	Arsenic	0.286
S-12	DDE	0.0185
	Chlordane	0.00445
	Arsenic	0.360
S-13	DDE	0.0281
	Chlordane	0.00318
	Arsenic	0.378
S-14	DDE	0.0277
	Chlordane	0.00312
	Arsenic	0.288

Table 4.9-4
ACT CHHSLs and USEPA RSLs for the Detected OCPs

Organic Chemical	CHHSL Levels (mg/kg)[1] (Residential Land Use From Updated Table dated 9/10)	Residential RSLs[2]
DDE	1.60	2.00
DDT	1.60	1.90
DDD	2.30	2.30
Chlordane	0.43	1.7

[1] California Office of Environmental Health Hazard Assessment Soil-Screening Numbers, Residential scenario, 9-23-10.
[2] USEPA Region 9 Regional Screening Levels for a Residential Setting, May 2018

Arsenic was detected in all 14 samples at levels ranging from 0.281 mg/kg to 0.549 mg/kg which fall below suggested DTSC Upper-Bound Arsenic Concentration level of 12 mg/kg for Southern California for sites in Southern California.

In conclusion, detected OCPs fell below CHHSLs for their respective chemical. Soils samples collected during the investigations were tested for OCPs and arsenic. OCPs, detected in all 14 samples fell below CHHSLs and USEPA RSLs for their respective chemical. Arsenic was detected in all 14 samples at low levels that are below the DTSC suggested level of 12 mg/kg for Southern California.

Sewer Lift Station Site

On February 13, 2018 a total of 2 soil samples were obtained from random locations at the Sewer Lift Station site. The approximate location where each sample was collected is shown on **Figure 4.9-3, *Sample Location Map Phase I ESA NWC***. The samples were collected at depths of 2 to 8 inches below existing grade using hand tools. The hand tools were washed in a solution of phosphate-free detergent and water and double rinsed with clean water after each sample was collected. The soil samples were collected in four-ounce jars provided by American Scientific Laboratory. The samples were labeled and stored in a cooler packed with ice for transportation to American Scientific Laboratory, a state-certified environmental testing laboratory (ELAP #2200). A copy of the Chain of Custody Record is included with the *Phase I ESA NWC*. The samples were analyzed for organochlorine pesticides using EPA Method 8081A.

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FIGURE 4.9-3
SAMPLE LOCATION MAP PHASE I ESA NWC

Source: Phase I ESA NWC (**Appendix H3**)

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Of the 2 samples collected, neither of them had detectable levels of pesticides. The test results are summarized in **Table 4.9-5, Phase I ESA NWC Organochlorine Pesticide (OCP) Test Results**.

Table 4.9-5
Phase I ESA NWC Organochlorine Pesticide (OCP) Test Results

Sample I.D.	Analytes	Test Results (mg/kg)
S-1	ND	ND
S-2	ND	ND

*ND: Non Detect

Based on this information, implementation of the proposed Project will not result in any impacts due to the agricultural use of the Project site.

Occupancy

Regarding potential for significant transport of hazardous materials or wastes after the project site is occupied, residential uses are not associated with the transport of large quantities of hazardous materials or wastes. Small quantities of materials considered to be hazardous, such as fuels for onsite equipment or cleansers, will be purchased and used onsite by future residents. As described in the preceding text, an extensive emergency response network exists to address an accidental release of hazardous materials/wastes to the environment.

The proposed Project will pave new roadways. These roadways are public roads that can be used by any common carrier. However, these roadways do not serve uses that utilize hazardous materials (such as gasoline stations) and any future use of the paved roadways by transporters of hazardous materials will be random, not routine. Thus, based on the low probability of an accidental release occurring within a residential area and the existing and future emergency response capabilities to respond to such a release, the potential impact under this issue would typically be considered a less than significant adverse hazard/hazardous material impact, including air emissions from increased vehicle miles traveled on the adjacent roadways from the proposed Project. The emissions from the roadway include small quantities of criteria pollutants in conjunction with this residential use.

However, to ensure that future residents can and will effectively manage their household hazardous wastes, the following mitigation measure shall be implemented. The County and local jurisdictions (cities) maintain programs for collection and disposal of small quantities of "household hazardous materials/wastes" to ensure that these materials are not disposed of with typical municipal solid waste. Although most residents are familiar with such programs, **Mitigation Measure MM-HAZ-3** (see Section 4.9.5) shall be implemented to ensure residents are informed of household hazardous waste collection programs in the local area with the objective of minimizing future improper disposal of such wastes. Implementation of **Mitigation Measure MM-HAZ-3** may not eliminate all improper disposal of such wastes, but it can provide residents with information that will assist in minimizing such disposal in the future. Impacts will be reduced to a less than significant level.

It is not anticipated that the drainage facilities will require any significant transport of hazardous materials or wastes as part of on-going maintenance. Any impacts will be less than significant.

Sewer Lift Station

The lift station would be constructed on an approximately 0.22 acre site. It is anticipated that the lift station would include a wet well, valve vault, provisions for odor control, a control building with electrical facilities and emergency standby generator, and an electrical service panel and transformer.

The lift station would have two 20 horsepower (HP) pumps installed (one duty and one standby). These pumps would utilize electrical energy on an annual basis. This station would also have an 80 kilowatt (KW) emergency diesel generator to be used during electrical power outages.

To calculate power usage, it is assumed that one 20 HP pump will run approximately 11 hours per day on average to meet ultimate average flows.

It is not anticipated that there will be any hazardous materials utilized at the sewer lift station beyond cleaning supplies and storage of diesel fuel. Therefore, the operation of the sewer lift station will not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts will be less than significant.

THRESHOLD 21.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 with Mitigation Incorporated

Please reference the discussion in Threshold 21.a, above. The Project will be required to adhere to South Coast Air Quality Management Rule 402, and **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**. With adherence to South Coast Air Quality Management Rule 402, and **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**, the Project will 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. Any impacts will be reduced to a less than significant level.

4.9.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The following standard conditions were identified in the IS in order to ensure that the Project's potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan was reduced to a less than significant level:

SC-HAZ-1 **Prior to final map recordation, prior to grading permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787.**

SC-HYD-1 **Pursuant to the Menifee Municipal Code § 15.01.015, new development or redevelopment projects shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The Director of Public Works will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.**

SC-HYD-2 **The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.**

SC-PS-1 **Prior to the issuance of a certificate of occupancy for each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.**

SC-TR-2 **The Applicant is required to develop and implement a City-approved Traffic Control Plan (TCP) addressing potential construction-related traffic detours and disruptions. In general, the TCP will ensure that to the extent practical, construction traffic would access the Project site during off-peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses.**

Mitigation Measure(s)

The following mitigation measures are provided to reduce potential adverse hazards and hazardous material impacts related to accidental releases of hazardous materials during construction and operations, including known and unknown substances, and soils excavated from existing ponds:

MM-HAZ-1 **Prior to grading permit final, and during construction, should an accidental release of a hazardous material occur, the following actions will be implemented: construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be notified; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above sampling or remediation activities related to the contamination will be conducted under the oversight of Riverside County Site Cleanup Program. All of the above actions shall be documented and made available to the appropriate regulatory agencies prior to closure (a determination of the regulatory agency that the site has been remediated to a threshold that poses no hazard to humans) of the contaminated area.**

MM-HAZ-2 **During grading if an unknown contaminated area is exposed based on field observations by the contractor, soils engineer or County inspector, the following actions will be implemented: any contamination found during construction will be reported to the Riverside County Site Cleanup Program and all of the sampling or remediation related to the contamination will be conducted under the oversight of the Riverside County Site Program; construction activities in the immediate area will be immediately stopped; appropriate regulatory agencies will be identified; a qualified professional (industrial hygienist or chemist) shall test the contamination and determine the type of material and define appropriate remediation strategies; immediate actions will be implemented to limit the volume and area impacted by the contaminant; the contaminated material, primarily soil, shall be collected and removed to a location where it can be treated or disposed of in accordance with the regulations in place at the time of the event; any transport of hazardous waste from the property shall be carried out by a registered hazardous waste transporter; and testing shall be conducted to verify that any residual concentrations of the accidentally released material are below the regulatory remediation goal at the time of the event. All of the above actions shall be documented and made available to the appropriate regulatory agencies prior to closure of the**

contaminated area (a determination of the regulatory agency that the site has been remediated to a threshold that poses no hazard to humans).

MM-HAZ-3 Prior to issuance of occupancy permits, an information brochure shall be prepared and approved by the Riverside County Environmental Health Department and provided to all home purchasers prior to the close of escrow that informs all purchasers of homes within this development of the system for disposal of household hazardous wastes and the prohibition against disposal of such materials in the municipal solid waste collection system that serves the subdivision. This brochure shall also provide residents with an outline of a neighborhood plan to support self-sufficiency in an emergency. This will include how to establish a volunteer fire response team to support the local fire and emergency responders to manage small fires and identification of local residents with emergency response skills (medical personnel or individuals certified to perform first aid or CPR.

MM-HAZ-4 Soil excavated from the pond may only be used for non-residential fills and shall not be used in residential fills. Prior to any ground disturbance, the Project applicant shall test any soil excavated from the pond to determine if the excavated soils contain any analytes as metals, coliforms, Nitrogen, Phosphorus, etc. Should any remediation be required prior to relocation for fill, any work conducted shall be in compliance with guideline set by an oversight agency such as the County Department of Environmental Health Services (DEHS) or the Department of Toxic Substances Control (DTSC), prior to grading permit final.

4.9.6 Cumulative Impacts

The hazardous materials study area considered for cumulative impacts consists of (1) the area that could be affected by proposed activities, such as the release of hazardous materials, and (2) the areas affected by other projects whose activities could directly or indirectly affect the presence or fate of hazardous materials on site. In general, only the Project site and areas adjacent to the Project site are considered for cumulative impacts due to the limited potential impact area associated with release of hazardous materials into the environment.

According to the IS, the Project will have no impact such that it is 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, result in an inconsistency with an Airport Master Plan, require review by the Airport Land Use Commission, (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 result in a safety hazard for people residing or working in the Project area, or, (for a project within the vicinity of a private airstrip, or heliport), would result in a safety hazard for people residing or working in the Project area).

Also according to the IS, the Project would have a less than significant impact such that it would impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan (see **Standard Condition SC-TR-2**), emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (see **Standard Condition SC-HYD-1** and **Standard Condition SC-HYD-2**), or, expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (see **Standard Condition SC-HAZ-1** and **Standard Condition SC-PS-1**).

Project construction would involve the routine use of hazardous materials, including fuels, paints, and solvents. However, the amount of these materials during construction would be limited and regulated. Therefore, they would not be considered a significant environmental hazard. Implementation of BMPs would further reduce any impacts associated with hazardous materials during Project construction (see **Standard Condition SC-HYD-1**).

Project operational activities would involve the use of storage of household hazardous materials typical of residences. These uses would not present a significant hazard to the residents of the community or to the environment with regulatory compliance procedures in place (see **Standard Condition SC-HYD-2**).

Mitigation Measure MM-HAZ-1 through **Mitigation Measure MM-HAZ-4**, are provided to reduce potential adverse hazards and hazardous material impacts related to accidental releases of hazardous materials during construction and operations, including known and unknown substances, and soils excavated from existing ponds.

Based on adherence to **Standard Conditions SC-HAZ-1**, **SC-HYD-1**, **SC-HYD-2**, **SC-PS-1**, and **SC-TR-2**, and incorporation of **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**, the proposed Project will not result in adverse cumulative hazard and hazardous materials impacts that rise to a cumulatively considerable level.

4.9.7 Unavoidable Significant Adverse Impacts

The Project will change the land use on the Project site and create a potential for certain adverse impacts regarding hazards and hazardous material issues both during construction and occupancy. There will be some adverse impacts as a result of implementing the Project. However, adherence to **Standard Conditions SC-HAZ-1**, **SC-HYD-1**, **SC-HYD-2**, **SC-PS-1**, and **SC-TR-2**, and incorporation of **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**, these potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level for hazards and hazardous material issues. Thus, the Project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts. The Project hazard and hazardous material impacts are less than significant.

4.10 HYDROLOGY AND WATER QUALITY

4.10.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of hydrology and water quality from implementation of the Project. The Hydrology and Water Quality Section, of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

24. Water Quality Impacts.

a. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?
b. Violate any water quality standards or waste discharge requirements?
c. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
d. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
e. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
f. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
g. Otherwise substantially degrade water quality?
h. Include new or retrofitted stormwater Treatment Control Best Management Practices (BMPs) (e.g. water quality treatment basins, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors and odors)?

25. Floodplains.

a. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?
b. Changes in absorption rates or the rate and amount of surface runoff?
c. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Dam Inundation Area)?
d. Changes in the amount of surface water in any water body?

Based on the analysis in the IS it was determined that all of the questions related to hydrology and water quality (in the questions asked above) **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The text contained in issue

areas 24.a through 24.c was revised. 25.a was also revised and moved under 24. and became 24.e; these text revisions will be reflected in the DEIR. Issue areas 24.e through 24.h and 25.b through 25.d were deleted from the (IS) checklist and will not be analyzed in the DEIR. Additionally, a new issue area was added to the (IS) checklist and became 24.d and will be analyzed in the DEIR.

Therefore, the following eight (8) issue areas will be analyzed in the DEIR:

24. Water Quality Impacts.

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?
d. Result in substantial erosion or siltation on-site or off-site?
e. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?
f. 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?
g. Impede or redirect flood flows?
h. In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?
i. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Standard Conditions SC-HYD-1 (Best Management Practices), **SC-HYD-2** (Water Quality Management Plan) shall be carried over to this DEIR.

No mitigation measures were presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *County of Riverside General Plan (Flood and Dam Inundation Hazards Safety and Land Use Elements)*
  https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- Riverside County Water Quality Management Plan for Urban Runoff
  http://rcflood.org/downloads/npdes/WQMP%20with%20Exhibit%20C%2009-17-04%20Errata%20Revisions%20Tracked%20v.pdf
- Harvest Valley/Winchester Area Plan (*HVWAP*)
  https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633
- *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439 Southeast of Leon Road and Holland Road Riverside, California*, prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation*, **Appendix F**)

- W*ater Supply Assessment Report Canterwood Project*, prepared by Eastern Municipal Water District, February 21, 2018 (*WSA*, **Appendix N)**
- California Water Boards Santa Ana Region Basin Plan https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/2016/Chapter_3_Feb_2016.pdf
- *Project Specific Water Quality Management Plan*, prepared by JLC Engineering and Consulting, Inc. June 19, 2018 (*WQMP,* **Appendix I1)**
- *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439, County of Riverside, California*, prepared by JLC Engineering & Consulting, Inc. June 19, 2018 (*HHS,* **Appendix I2)**
- County of Riverside General Plan EIR https://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html
- Riverside County Stormwater & Water Conservation Tracking Tool http://rivco.permitrack.com/
- Geotechnical Investigation and Infiltration Testing. Tentative Tract Map 37439, Riverside County, California, prepared by RMA GeoScience March 20, 2016 (*Geo Investigation*, **Appendix F**)
- *Riverside County General Plan (Safety Element)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding hydrology and water quality were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 24.a through 24.g and 25.a are the focus of the following evaluation of hydrology and water quality.

The following discussions are abstracted from the above referenced technical study, which is provided in Volume 2 of the DEIR, the Technical Appendices.

4.10.2 Environmental Setting

4.10.2.1 Drainage

The Residential Project site components are located on two (2) parcels. These parcels are referred to as: APNs 466-310-026 and 466-310-002, and are located in Section 8, Township 6 South, Range 2 West of the San Bernardino Base and Meridian, as shown on the Perris United State Geological Survey (USGS) 7.5 minute topographic map.

The Off-site Project components are located on eight (8) parcels. These parcels are referred to as: APNs 466-120-023, 466-120-014, 466-120-021, 466-120-011, 466-120-022, 466-120-002, 466-120-019, and 364-200-007, and are located in Section 7, Township 6 South, Range 2 West; Section 1, Township 6 South, Range 3 West; and Section 8, Township 6 South, Range 2 West of the San Bernardino Base and Meridian, as shown on the Perris United State Geological Survey (USGS) 7.5 minute topographic map. Reference **Figure 4.10-1**, ***Location of Tentative Tract No. 37439 and Associated Off-site Improvements***.

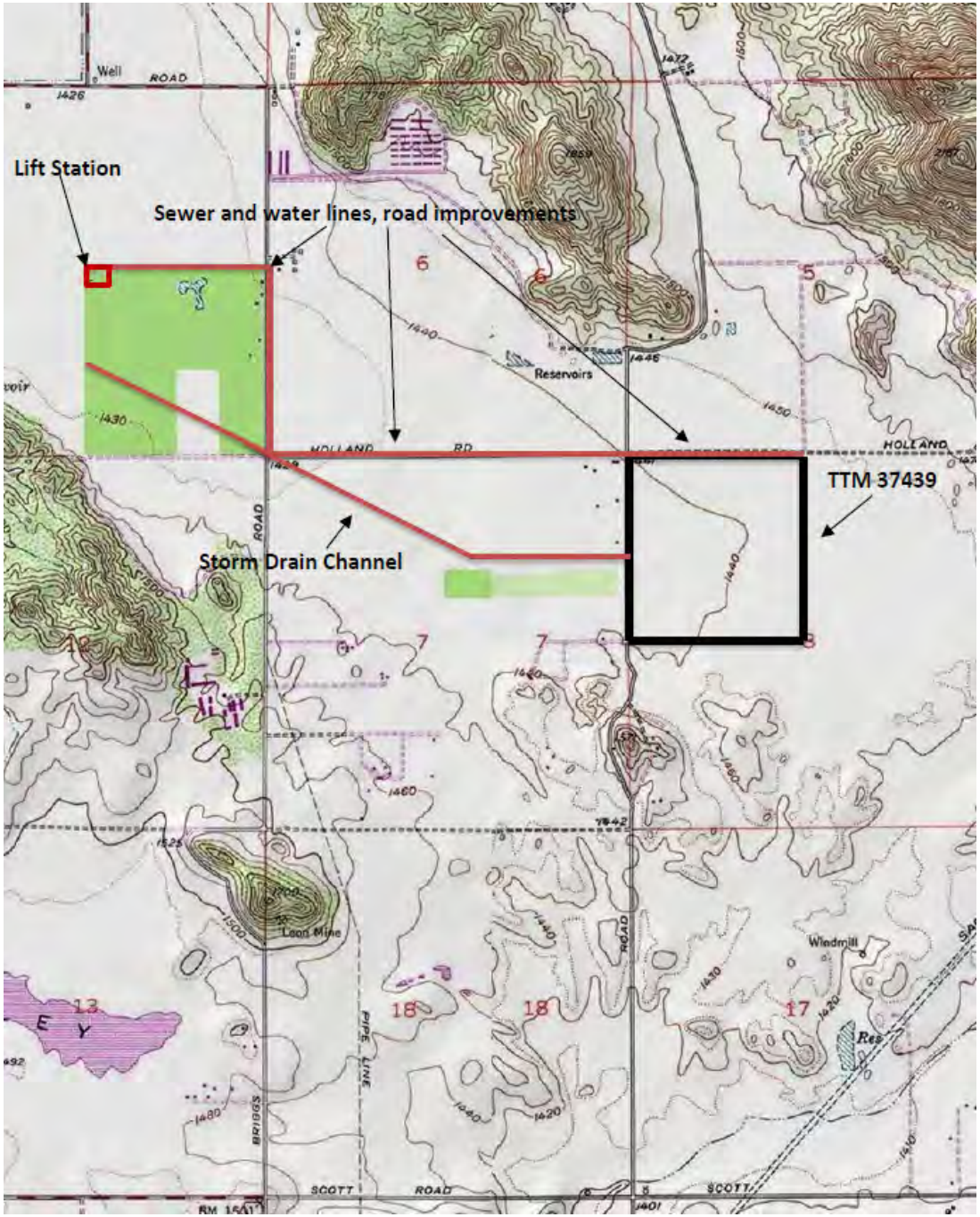
The Project site is situated in the Perris Peneplain, a portion of the Northern Peninsular Range

Province of Southern California. In general, the Perris Peneplain is a broad valley bounded on three sides by mountain ranges: the San Jacinto Mountains on the east, the San Bernardino Mountains on the north, and the Santa Ana Mountains on the southwest; the northwestern extent of the Perris Peneplain is the Santa Ana River. The Peneplain is a large depositional basin composed primarily of materials eroded from the granitic bedrock surfaces of the Southern California Batholith. The geological composition of the Project site is representative of the region as a whole, with alluvial fans and terraces formed by local granitic bedrock decomposition. Three small clusters of granitic bedrock outcrops are located near the south-central boundary of the Project site.

The Project site is essentially flat, bring comprised primarily of farmland. Elevations across the Project site average 1,440 feet above mean sea level (AMSL) while the average elevation across most of the off-site improvements is 1,430 AMSL. Refer to **Figure 4.10-2**, ***Regional Geologic Map***, which shows the Residential Project site, which is flat, and the landforms that surround it.

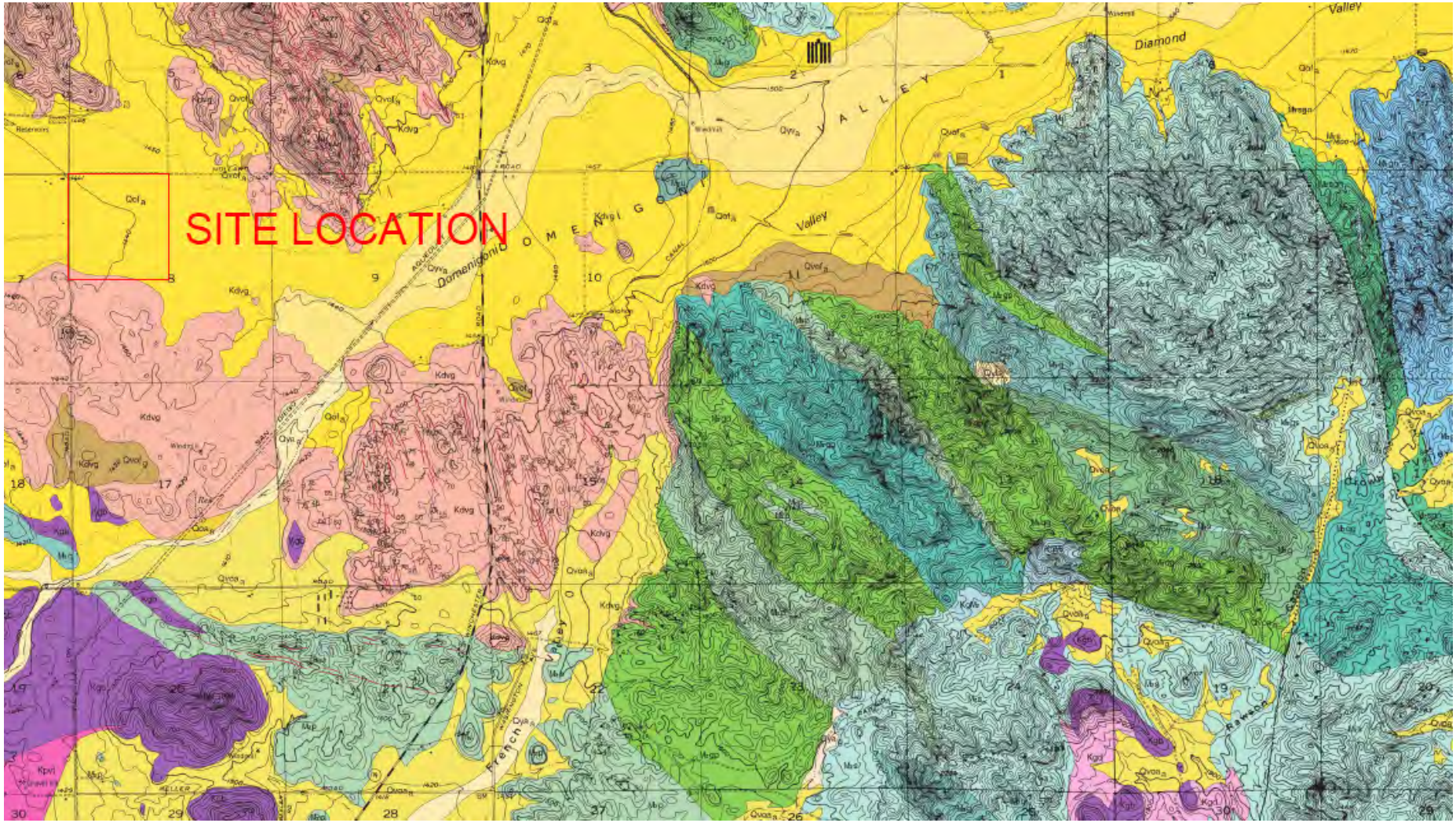
According to the HVWAP, the Project is located in a Special Flood Hazard Area and the potential exists for inundation based on the Project's proximity to the Diamond Valley Lake. Reference **Figure 4.10-3**, ***Harvest Valley/Winchester Area Plan Special Flood Hazard Areas***.

FIGURE 4.10-1
LOCATION OF TENTATIVE TRACT NO. 37439 AND ASSOCIATED OFF-SITE IMPROVEMENTS



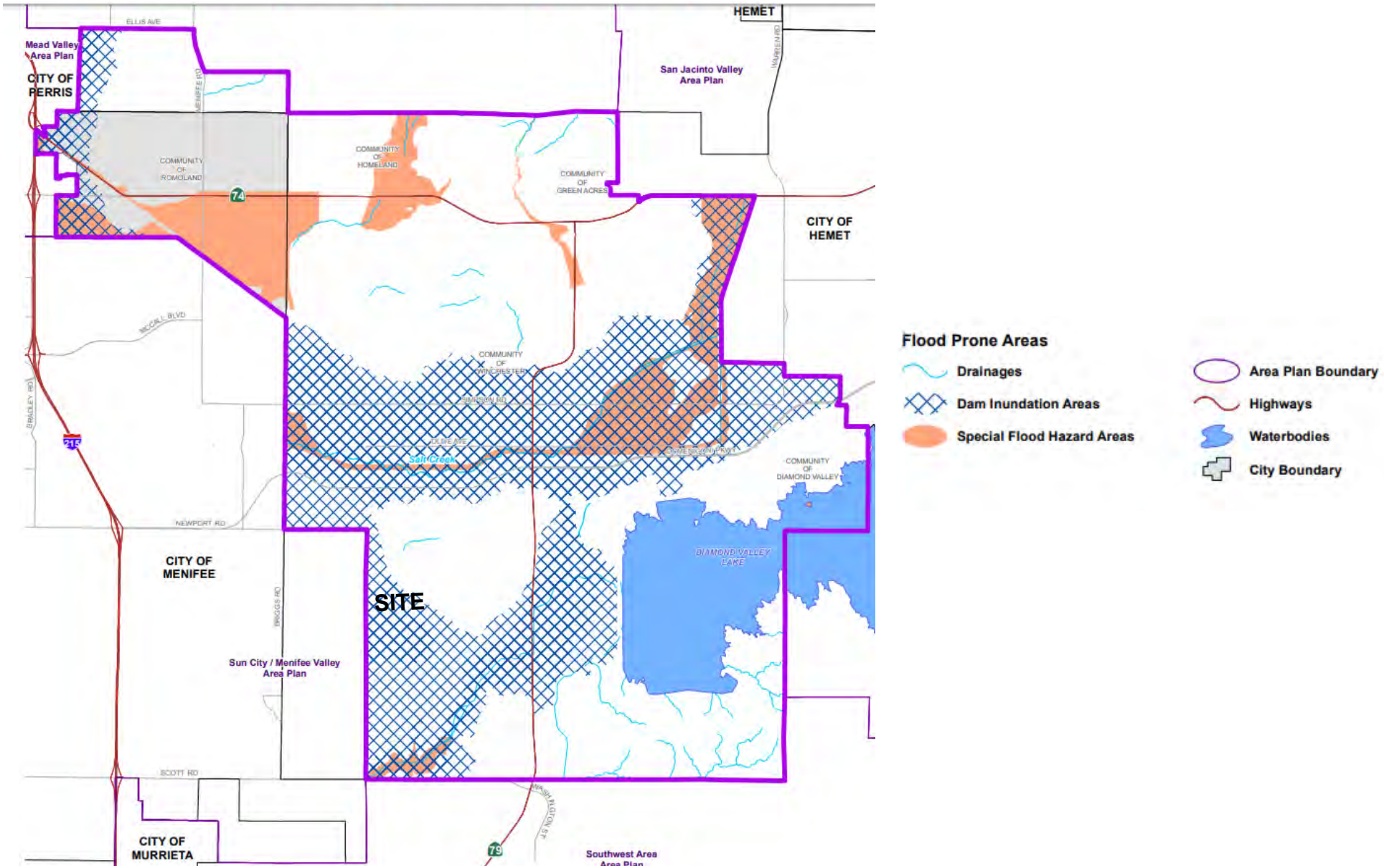
Source: CUL Report (**Appendix E**)

FIGURE 4.10-2
REGIONAL GEOLOGIC MAP



Source: GEO Report (**Appendix F**)

FIGURE 4.10-3
HARVEST VALLEY/WINCHESTER AREA PLAN SPECIAL FLOOD HAZARD AREAS



Source: HV/WAP https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633

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4.10.2.2 Watershed Description

The closest landform to the Residential Project site is the hill located off-site to the northeast. The hill has an elevation of 1,978' AMSL at the highest point and the northeast limit of the watershed begins at the top of this hill. Water sheet flows from the hill, in a northeasterly to southwesterly direction, onto the east side of the Project site where the elevation is 1,444' AMSL (34' lower than the hill).

In addition, a small portion of the Project-watershed extends off-site to the south of the Residential Project site, where the land has an elevation of 1,494' AMSL. On the south side of the Residential Project site, water sheet flows from off-site to the south onto the Residential Project site because the on-site elevation is about 1,436' AMSL, 58' lower than the adjacent off-site land.

No permanent source of water was observed in the Project site. A constructed ponding area is located at the northwestern corner of the off-site improvement area, slated for the lift station. The closest natural watercourse that represents a permanent water source is Warm Springs Creek, a USGS-designated blueline stream, located approximately 1.25 miles south of the Project site.

Using the Riverside County Flood Control and Water Conservation District Hydrology Manual, the runoff from each watershed was calculated for the 10-year and 100-year storm events. **Figure 4.10-4**, ***Tentative Tract Map 37439 Receiving Waters Map***, is provided to illustrate the location of the Project-site in relation to the Santa Ana River watershed and to the San Jacinto Sub-Watershed. **Figure 4.10-4** is abstracted from the WQMP and shows that the Project site drains into the San Jacinto River subarea, which is located in the Santa Ana River watershed, which drains into Canyon Lake. Flows from Canyon Lake then continue west to Lake Elsinore. Temescal Creek also flows out of Lake Elsinore and has its confluence with the Santa Ana River west of the City of Corona.

Figure 4.10-5, ***FEMA FIRM Map No. 06065C2090G***, shows that the proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard.

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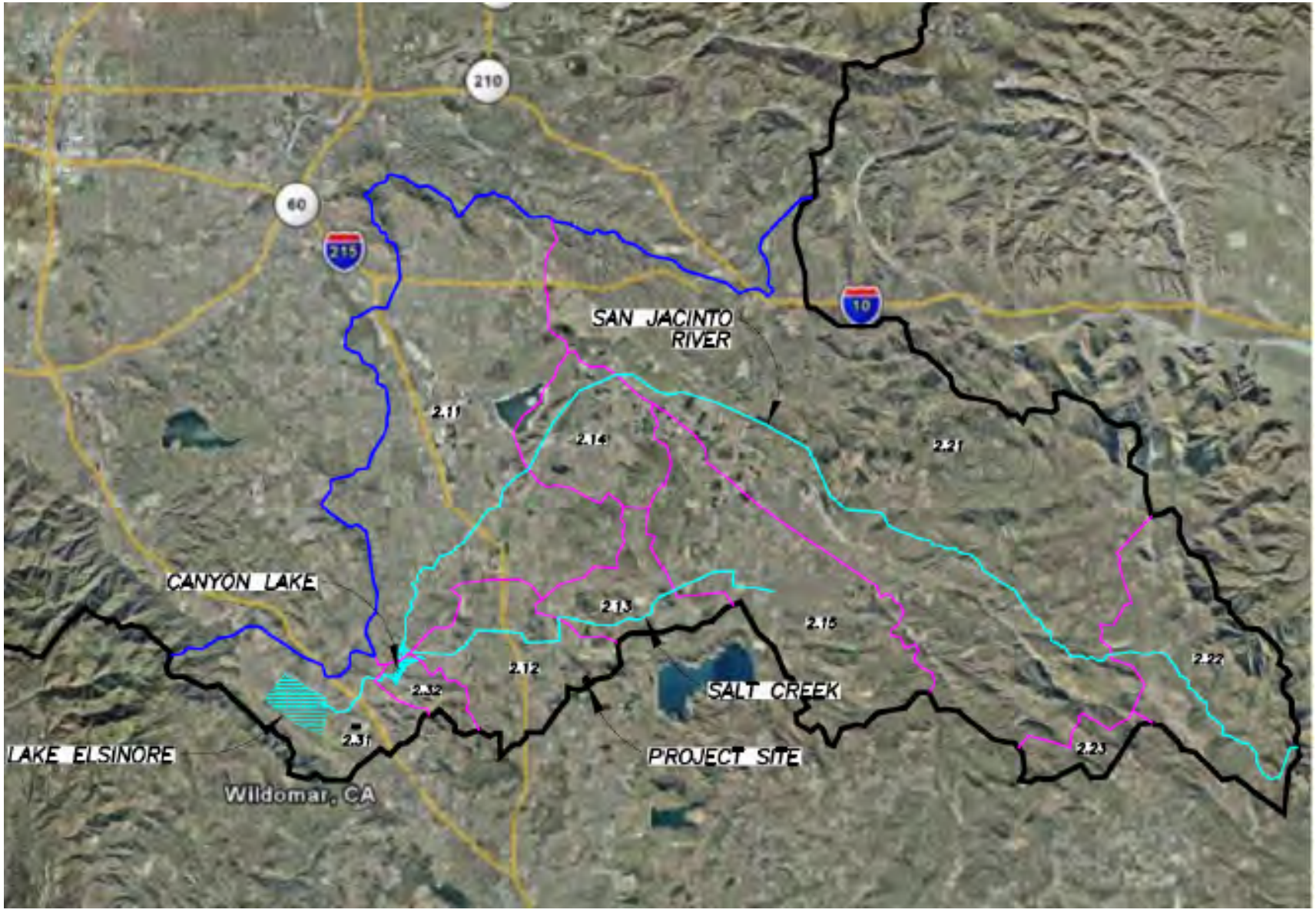
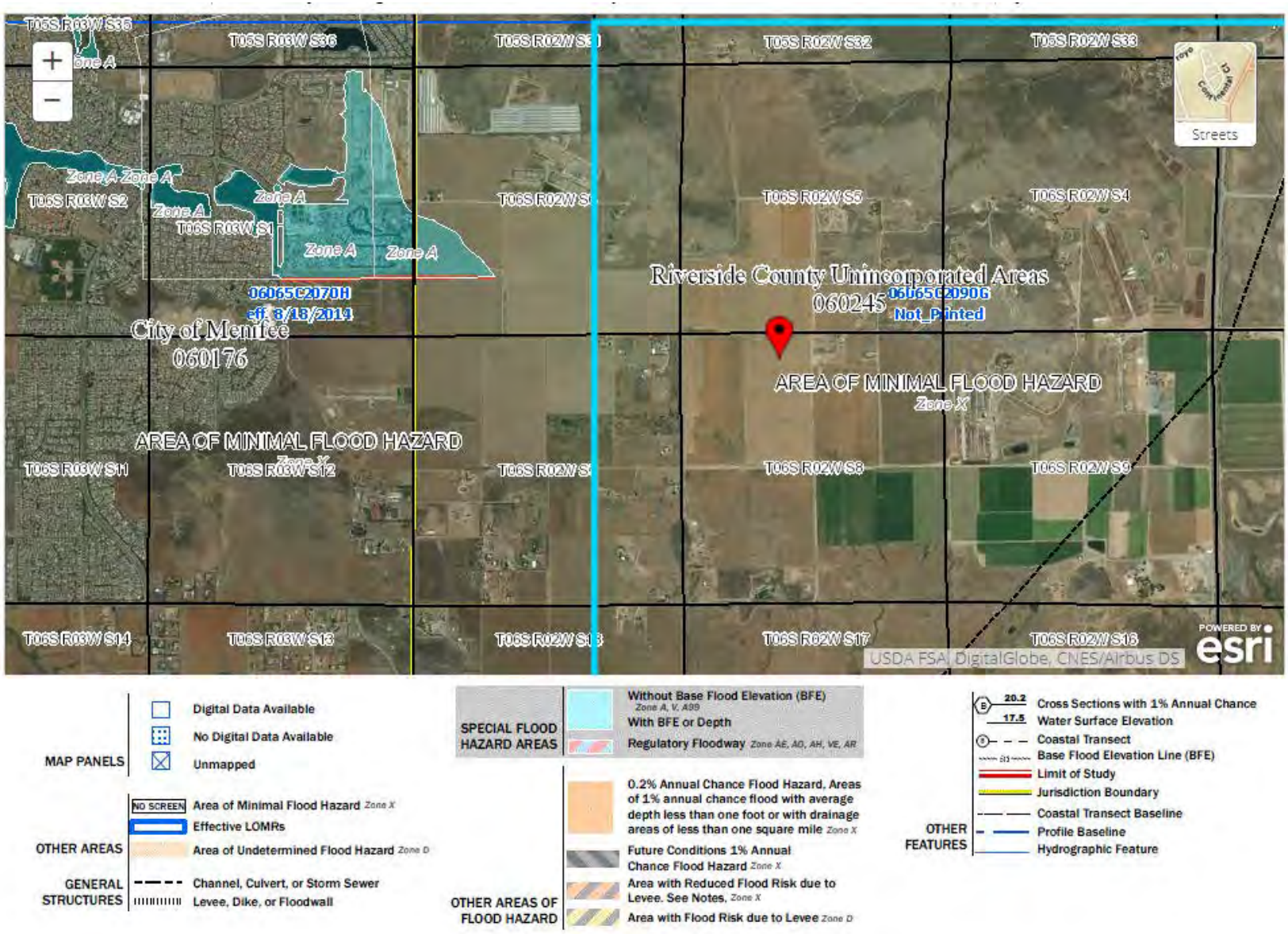
FIGURE 4.10-4
TENTATIVE TRACT MAP 37439 RECEIVING WATERS MAP



Source: WQMP Report (**Appendix I1**)

FIGURE 4.10-5
FEMA FIRM MAP NO. 06065C2090G



Source: Subchapter 8.3 of this DEIR, Initial Study

4.10.2.2 Groundwater Resources and Quality

Groundwater is not being proposed to serve this Project, as Eastern Municipal Water District (EMWD) considers current groundwater production to be utilized completely by existing customers. New developments, including the Proposed Project, will be supplied with additional imported water from one of the following sources: (1) treated imported water from Metropolitan Water District of Southern California (MWD); (2) untreated imported water from MWD, which is subsequently treated by EMWD; or (3) untreated imported water treated by EMWD and recharged into the San Jacinto River Groundwater Basin for later withdrawal.

EMWD's service area overlies the San Jacinto Groundwater Basin, which is primarily comprised of alluvium-filled valleys carved into the elevated bedrock plateau of the Perris Block. The San Jacinto Groundwater Basin is generally considered a closed basin surrounded by impermeable bedrock mountains and hills. For groundwater management plan and reporting purposes, the San Jacinto Groundwater Basin is further separated into the Hemet/San Jacinto Basin, where the San Jacinto Fault Zone strongly influences the groundwater hydrology, and the West San Jacinto Basin.

Groundwater management zones within the San Jacinto Groundwater Basin as a whole are delineated based on groundwater flow, groundwater divides, and changes in groundwater quality. 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. The West San Jacinto Basin covers the Perris North, Perris South, San Jacinto Lower Pressure, and Menifee Management Zones, and the Lakeview portion of the Lakeview/Hemet North Management Zone. EMWD produces water for potable use or blending in four of the management zones: Perris North, Hemet South, San Jacinto Upper Pressure and Canyon. Desalter production wells are located in the Perris South and Lakeview/Hemet North Management Zones.

The San Jacinto Groundwater Basin is managed under two groundwater management plans. The Hemet/San Jacinto Groundwater Management Plan (HSJ Management Plan) covers the Hemet South, Canyon, San Jacinto Upper Pressure, and Hemet North portion of the Lakeview/Hemet North Groundwater Management Zones. The West San Jacinto Groundwater Basin Management Plan (WSJ Management Plan) covers the Perris North, Perris South, San Jacinto Lower Pressure, Menifee, and the Lakeview portion of the Lakeview/Hemet North Management Zones.

In 2001, the Cities of Hemet and San Jacinto, Lake Hemet Municipal Water District, EMWD, and representatives of the private groundwater producers, with DWR acting as an impartial mediator, began working on a groundwater management plan for the Hemet/San Jacinto Basin. The group discussed and resolved several controversial issues, including San Jacinto Tunnel seepage water, the Fruitvale Judgment and Decree, export of groundwater from the basins, and how to maximize the use of recycled water. As a result of their efforts, a final HSJ Management Plan was completed in 2007 and a Stipulated Judgment was entered with the Superior Court of the State of California for the County of Riverside in April of 2013.

The HSJ Management Plan:

- Limits the amount of water being extracted from the basin free of the replenishment charge to a sustainable yield.

- Implements continued recharge of the basin using imported water through the IRRP.
- Ensures settlement claims by the Soboba Tribe are facilitated and accommodated.
- Expands the existing water production and water services system to meet future urban growth through the use of imported water recharged into the basin.
- Protects and/or enhances water quality in the Hemet/San Jacinto Basin.
- Supports cost-effective water supplies and treatment by the public agencies.
- Eliminates groundwater overdraft and enhances basin yield.

In the West San Jacinto area, a cooperative groundwater management plan helps insure the reliability and quality of the water supply. In June 1995, EMWD adopted the WSJ Management Plan in accordance with the statutes in the California Water Code §§ 10750 through 10755. The Plan was adopted after extensive public outreach and meetings with interested individuals and agencies. Implementation of the WSJ Management Plan began directly after its adoption. Initial efforts to implement the WSJ Management Plan included establishing an advisory committee; prioritizing the management zones; evaluating groundwater resources including establishing groundwater quality, level, and extraction monitoring programs; and conducting hydro-geophysical investigations. The West San Jacinto Groundwater Basin Management Plan Annual Report, documenting the implementation of the plan and activities in the groundwater management zones, has been published annually since 1996.

Water Quality

Water quality for the Project site is regulated under the jurisdiction of the Santa Ana Regional Water Quality Control Board (SARWQCB). Surface water quality may be impacted by both point source and non-point source discharges of pollutants. Point source discharges are regulated through National Pollution Discharge Elimination System (NPDES) permitting. Non-point source pollution is now considered to be the leading cause of water quality impairments in the state, as well as the entire nation. Non-point source pollution is not as readily quantifiable as pollution that is derived from point sources, since it occurs through numerous diffuse source locations. Rainwater, snowmelt, or irrigation water can pick up and transport pollutants as it moves across land or paved surfaces, and these pollutants may ultimately be discharged into streams, lakes, the ocean, and groundwater. Urban areas and agriculture are both considered to substantially contribute to nonpoint source pollution in surface waters; pollutants associated with agricultural areas include fertilizers, pesticides, fecal coliform, salts, and sediments. Pollutants associated with urban areas include pathogens, organic compounds, sediment, oil and grease, metals, trash and debris, and nutrients.

Table 4.10-1, ***Identification of Receiving Waters***, provides a list of the receiving waters the Project site is tributary to (organized upstream to downstream), the designated beneficial uses, and the proximity, if any, to a RARE beneficial use. The two (2) downstream surface water locations are: Canyon Lake and Lake Elsinore. Since Canyon Lake is the first water body with listed impairments to receive flows from the Project site, the primary surface water quality pollutants of concern are nutrients and pathogens (bacteria and viruses).

Table 4.10-1
Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Canyon Lake	Nutrients, Pathogens (Bacteria & Viruses)	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE-designated water body
San Jacinto River	N/A	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE-designated water body
Lake Elsinore	Metals (Mercury), Nutrients, Organic Enrichment/Low Dissolved Oxygen, Polychlorinated biphenyls, sediment Toxicity, Sedimentation, Unknown Toxicity	REC1, REC2, WARM, WILD	Not a RARE-designated water body

Source: *WQMP* (**Appendix I1**)

Beneficial uses of water are defined as the uses necessary for the survival or well-being of humans, plants, and wildlife. As listed in **Table 4.10-1**, the existing beneficial uses for Canyon Lake, San Jacinto River, and Lake Elsinore, as designated by the RWQCB in the Basin Plan, are defined as follows:

- Municipal and Domestic Supply (MUN) - Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.
- Agricultural Supply (AGR) - Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- Ground Water Recharge (GWR): uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- Water Contact Recreation (REC1) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, or use of natural hot springs.
- Non-Contact Water Recreation (REC2) – Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Warm Freshwater Habitat (WARM) – Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
- Wildlife Habitat (WILD) – Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Without Project standard conditions (discussed below), varying amounts of bacteria, nutrients, pesticides, sediments, as well as urban pollutants, such as motor oil, antifreeze, gasoline, detergents, trash, domestic animal waste and fertilizers, can degrade storm water flows**. Table 4.10-2, *Pollutant of Concern Summary***, lists the pollutant category and the potential for pollutant

for the Project (and/or the existing Project site).

Table 4.10-2
Pollutant of Concern Summary

Pollutant Category	Potential for Project and/or Existing Site
Bacterial Indicators	Potential
Metals	No Potential
Nutrients	Potential
Pesticides	Potential
Toxic Organic Compounds	No Potential
Sediments	Potential
Trash & Debris	Potential
Oil & Grease	Potential

Source: *WQMP* (**Appendix I1**)

The Project requires the preparation of a SWPPP for control of pollutants during construction and a WQMP for control of pollutants during occupancy of the Project site. The SWPPP shall be prepared and implemented for each phase of the Project in compliance with the requirements of the Construction General Permit. The SWPPP and WQMP must address the hydrologic conditions of concern by maintaining pre-development flows once the Project is developed and by treatment of the surface runoff from the Project site before discharge to Canyon Lake.

The protection of water quality and future runoff volumes will be accomplished through site optimization, which includes the preparation of a site drainage plan, SWPPP and WQMP. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are required, as outlined in Section 4.10.5, in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are not considered unique mitigation under CEQA.

4.10.2.3 Pertinent Regulations

4.10.2.3a Federal

Federal Clean Water Act

The Federal Water Pollution Control Act (also known as the Clean Water Act (CWA)) is the principal statute that governs water quality. The CWA establishes the basic structure for regulating discharges of pollutants into waters of the United States and authorizes the United States Environmental Protection Agency (USEPA) to implement pollution control programs, such as establishing wastewater standards for industry. The goal of the CWA is to put an end to all discharges and restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharges of pollutants into the nation's waters, establishes water quality standards for contaminants in surface waters and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit has been obtained under its provisions. A point source is defined as a discernible, confined, and discrete conveyance, such as a pipe, a ditch, or a channel. The CWA mandates permits for wastewater and stormwater discharges, requires states to establish site-specific water quality standards for navigable bodies of water, and regulates other activities that affect water quality, such as the dredging and filling of wetlands. The CWA also funded the construction of sewage treatment

plants and recognized the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source discharges of any pollutant (except dredge or fill material) into waters of the U.S.

The ACOE regulates discharges of dredged and/or fill material into waters of the United States. (Section 404 of the CWA.) "Waters of the United States" are defined in ACOE regulations at 33 C.F.R. Part 328.3(a). Navigable waters of the United States are those waters of the United States that are navigable in the traditional sense. Waters of the United States is a broader term than navigable waters of the United States and includes adjacent wetlands and tributaries to navigable waters of the United States and other waters, the degradation or destruction of which could affect interstate or foreign commerce.

The CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

The CWA and the State Porter-Cologne Water Quality Act (discussed below), require basin- wide planning. Additionally, the NPDES empowers the state Regional Water Quality Control Boards (RWQCBs) to establish discharge standards for pollutants and encourages the development of new approaches to water quality management.

CWA Section 402(p) provides a framework for regulating municipal and industrial storm water discharges. In November 1990, the USEPA published final regulations that establish requirements for specific categories of industries, including construction projects that encompass certain acreage, currently projects of one acre or larger.

The Santa Ana RWQCB developed a Basin Plan that identifies beneficial uses and water quality objectives for all waters of the state, both surface and subsurface (groundwater). A beneficial use is one of the various ways that water can be used for the benefit of people and/or wildlife.

National Pollutant Discharge Elimination System

Under the NPDES program promulgated under Section 402 of the CWA, all facilities that discharge pollutants from any point source into waters of the U.S. are required to obtain an NPDES permit. The term pollutant broadly includes any type of industrial, municipal, and agricultural waste discharged into water. Point sources include discharges from publicly owned treatment works (POTWs), from industrial facilities, and associated with urban runoff. Though the NPDES program addresses certain specific types of agricultural activities, the majority of agricultural facilities are defined as nonpoint sources and are exempt from NPDES regulation. Pollutant contributors come from direct and indirect sources. Direct sources discharge directly to receiving waters, and indirect sources discharge wastewater to POTWs, which in turn discharge to receiving waters. Under the national program, NPDES permits are issued only to direct point source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers.

Municipal discharge sources are POTWs that receive primarily domestic sewage from residential and commercial customers. Specific NPDES program areas applicable to municipal sources are the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer

Overflows, and the Municipal Storm Water Program. Non-municipal sources include industrial and commercial facilities. Specific NPDES program areas applicable to these industrial/commercial sources are: Process Wastewater Discharges, Non-Process Wastewater Discharges, and the Industrial Storm Water Program. NPDES issues two basic permit types: individual and general. The USEPA also integrates the NPDES program further into watershed planning and permitting.

The NPDES includes a variety of measures designed to minimize and reduce pollutant discharges. All counties with storm drain systems that serve a population of 50,000 or more, as well as construction sites one acre or more in size, must obtain an NPDES permit. The USEPA's Storm Water Phase II Final Rule minimizes and reduces pollutant discharges to a publicly owned conveyance or system of conveyances (including roadways, catch basins, curbs, gutters, ditches, man-made channels and storm drains, designed or used for collecting and conveying stormwater). The Phase II Final Rule requires the operator of a regulated small separate municipal storm sewer system (MS4) (such as the County) to develop, implement, and enforce a program (e.g., best management practices [BMPs], ordinances, or other regulatory mechanisms) to reduce pollutants in post-construction runoff from new development and redevelopment projects that include the disturbance of land greater than or equal to one acre. The County Public Works Department is the local enforcing agency of the MS4 NPDES permit.

Safe Drinking Water Act

The Federal Safe Drinking Water Act (SDWA) provides regulations on drinking water quality. The SDWA authorizes the USEPA to establish drinking water standards, such as the National Primary Drinking Water regulations (NPDWRs or primary standards). The NPDWRs protect drinking water quality by limiting the levels of specific contaminants that are known to occur or have the potential to occur in water and can adversely affect public health. All public water systems that provide service to 25 or more individuals are required to satisfy these legally enforceable standards. Water purveyors must monitor for these contaminants on fixed schedules and report to the USEPA when a maximum contaminant level (MCL) is exceeded. MCL is the maximum permissible level of a contaminant in water that is delivered to any user of a public water system. Drinking water supplies are tested for a variety of contaminants, including organic and inorganic chemicals (e.g., minerals), substances that are known to cause cancer (e.g., carcinogens), radionuclides (e.g., uranium and radon), and microbial contaminants (e.g., coliform and *Escherichia coli*). Changes to the MCL list are typically made every three years as the USEPA adds new contaminants, or based on new research or new case studies, revises MCLs for listed contaminants. The California Department of Health Services, Division of Drinking Water and Environmental Management, is responsible for the implementation of the SDWA in California.

National Flood Insurance Program

Under a mandate from the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973, the Federal Emergency Management Agency (FEMA) evaluates flood hazards. FEMA provides Flood Insurance Rate Maps (FIRMs) that identify potential flood areas to promote responsible floodplain development. To delineate a FIRM, FEMA conducts engineering studies referred to as Flood Insurance Studies (FIS). The most recent FIS and FIRM was completed and published for Riverside County in August 2008. Using information gathered in these studies, FEMA engineers and cartographers delineate Special Flood Hazard Areas (SFHAs) on FIRMs.

The Project site is located within Zone "X," which is identified as an area of minimal flood hazard on FEMA FIRM Map No. 06065C2090G.

The Flood Disaster Protection Act requires owners of all structures in identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally related financial assistance, such as mortgage loans from federally insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP). The NFIP is required to offer federally subsidized flood insurance to property owners in those communities that adopt and enforce floodplain management ordinances that meet minimum criteria established by FEMA. The National Flood Insurance Reform Act of 1994 further strengthened the NFIP by providing a grant program for state and community flood mitigation projects. The Act also established the Community Rating System, a system for crediting communities that implement measures to protect the natural and beneficial functions of their floodplains, as well as managing erosion hazards. Riverside County Flood Control and Water Conservation District is a member of NFIP.

4.10.2.3b State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. Under this Act, the State Water Resources Control Board (SWRCB) has ultimate control over state water rights and water quality policy. California is divided into nine regions related to water quality and quantity characteristics. Through its nine Regional Water Quality Control Boards (RWQCBs), the SWRCB implements the regulation, protection, and administration of water quality in each region. Each Regional Board is required to adopt a Water Quality Control Plan or Basin Plan that recognizes and reflects the regional differences in existing water quality, beneficial uses of the region's ground and surface water, and local water quality conditions and problems. The County, including the Project site, is in the Santa Ana River Basin, Region 8.

Water Quality Control Plan, Santa Ana River Basin

The Basin Plan for the Santa Ana River Basin establishes water quality standards for groundwater and surface water in the basin; including standards to maintain the beneficial uses of specific water bodies and the water quality levels that must be maintained to protect those uses. The Basin Plan includes an implementation plan describing actions by the Santa Ana RWQCB and others needed to achieve and maintain the water quality standards. The Santa Ana RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's groundwater and surface waters. The Basin Plan lists water quality problems for the region, along with causes, where they are known. Plans for improving water quality are included for water bodies with quality below the levels needed to enable all the beneficial uses of the water.

Storm Water Pollution Prevention Plans

Pursuant to the CWA, in 2009, the SWRCB issued a statewide general NPDES permit for stormwater discharges from construction sites (NPDES No. CAS000002). Under this Statewide General Construction Activity permit, discharges of storm water from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for

stormwater discharges or to be covered by the General Permit. Coverage by the General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a SWPPP. Each applicant under the General Construction Activity Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list BMPs implemented on the construction site to protect storm water runoff. Examples of BMPs include: detention basins for capture and containment of sediments, use of silt fencing, sandbags, or straw bales to control runoff and identification of emergency procedures in case of hazardous materials spills. The SWPPP must also contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters. The Project proponent will be required to obtain a construction NPDES permit prior to disturbing the Project site. Preparation of the SWPPP is a standard condition (see **Standard Condition SC-HYD-2** in Section 4.10.5) and is not considered unique mitigation under CEQA.

4.10.2.3c Riverside County

Riverside County Ordinance No. 754 requires the preparation and adoption of a "Project-Specific Water Quality Management Plan" (WQMP). This Ordinance was developed in response to Santa Ana Regional Board Order R8-2010-0033, which requires the preparation of a site specific WQMP that will identify BMPs to ensure that the water quality of receiving waters is not degraded following new development. New projects submitted to Riverside County are now required to submit a project-specific WQMP prior to the first discretionary project approval or permit. Project applicants may submit a preliminary project-specific WQMP for discretionary project approval (land use permit); however, a final version must be submitted for review and approval prior to the issuance of any grading or building permits.

As required by Riverside County, it is imperative that development Projects minimize changes to the hydrology of a site (hydromodification) to ensure that post-development runoff rates and velocities leaving a site do not adversely impact downstream erosion, sedimentation or stream habitat. Urban runoff and associated impacts may be reduced by minimizing impervious surfaces and incorporating other site-design concepts that replicate or reduce impacts to the pre-development storm water runoff condition. The goal of these site design techniques is to achieve post development runoff flow rates, volumes, velocities, and durations that mimic natural flows, prevent a significant increase in downstream erosion compared to the pre-development condition, and prevent significant adverse impacts to stream habitat during a 2- year, 10-year, and 24-hour rainfall event.

To minimize downstream erosion and subsequent sediment transport to Project-related downstream receiving water bodies, the Project must address the issue of Hydrologic Conditions of Concern (HCOC) under the WQMP unless one of the following three conditions are met:

- Runoff from the Project is discharged directly to a publicly-owned, operated and maintained MS4; the discharge is in full compliance with Co- Permittee municipalities (as listed in Table 1 of the *Riverside County Water Quality Management Plan for Urban Runoff* requirements for connections and discharges to the MS4, including both quality and quantity requirements); the discharge would not significantly impact stream habitat in close proximity to Receiving Waters; and the discharge is authorized by the Co-Permittee.
- The Project disturbs less than 1 acre, including all disturbances associated with larger

common plans of development.
- The Project's runoff flow rate, volume, velocity, and duration for the post-development condition do not exceed the pre-development condition for the 2-year, 10-year, and 24-hour rainfall events. This condition can be achieved by minimizing impervious area on a site and incorporating other site-design concepts that closely replicate pre-development conditions. This condition must be substantiated by hydrologic modeling methods acceptable to the County.

Preparation of the WQMP is a standard condition (see **Standard Condition SC-HYD-3** in Section 4.10.5) and is not considered unique mitigation under CEQA.

General Plan Policies

The following are applicable goals and policies from the General Plan related to hydrology and water quality:

- **Policy S 1.3** Continue to enforce penalties against grading without permits and ensure the restoration of land thus damaged. Continue to educate the public about the benefits of grading with permits and the penalties for grading without them. If the penalties are later determined to not be effective, explore whether the levying of greater penalties would be more effective in deterring illegal grading and ensuring the proper restoration of damaged lands.
- **Policy LU 5.3** Review all projects for consistency with individual urban water management plans.
- **Policy LU 18.1** Ensure compliance with Riverside County's water-efficient landscape policies. Ensure that projects seeking discretionary permits and/or approvals develop and implement landscaping plans prepared in accordance with the Water-Efficient Landscape Ordinance (Ordinance No. 859), the County of Riverside Guide to California Friendly Landscaping and Riverside County General Plan LU-40 July 11, 2017 Friendly Plant List. Ensure that irrigation plans for all new development incorporate weather-based controllers and utilize state-of-the-art water-efficient irrigation components.
- **Policy LU 18.3** Design and field check irrigation plans to reduce run-off. Emphasize the use of subsurface irrigation techniques for landscape areas adjoining non-permeable hardscape. Utilize subsurface irrigation or other low volume irrigation technology in association with long, narrow, or irregularly shaped turf areas. Minimize use of irregularly shaped turf areas.
- **Policy LU 18.2** Minimize use of turf. Minimize the use of natural turf in landscape medians, front-yard typical designs, parkways, other common areas, etc. and use drought tolerant planting options, mulch, or a combination thereof as a substitute. Limit the use of natural turf to those areas that serve a functional recreational element. Incorporate other aesthetic design elements such as boulders, stamped concrete, pavers, flagstone, decomposed granite, manufactured rock products to enhance visual interest and impact.
- **Policy LU 18.4** Coordinate Riverside County water-efficiency efforts with those of local water agencies. Support local water agencies' water conservation efforts.
- **Policy LU 18.5** Emphasize and expand the use of recycled water in conjunction with local water agencies. Recycled water determined to be available pursuant to Section 13550 of the California State Water Code shall be used for appropriate non-potable uses whenever it: a) provides a beneficial use to the customer; b) is economically and technically feasible; c) is consistent with applicable regulatory requirements; and d) is in the best interests of public health, safety, and welfare. With the exception of non-common areas of single-family home residential developments, all other irrigation systems must be designed and installed to

accommodate the current or future use of recycled water for irrigation. If no recycled water availability exists or is imminent in the vicinity of a project (as determined by prevailing water agency), all subsurface piping shall be installed as "recycled water ready" to reduce future retrofit costs. Such irrigation plans shall be developed in accordance with standards and policies of the applicable recycled water purveyor. Recycled water systems shall be designed to meet regulatory requirements of the California Department of Public Health and the local recycled water purveyor.

- **Policy LU 21.2** Require that adequate and available circulation facilities, water resources, sewer facilities and/or septic capacity exist to meet the demands of the proposed land use.
- **Policy HVWAP 20.1** Protect life and property from the hazards of potential dam failures and flood events through adherence to the Flood and Inundation Hazards section of the General Plan Safety Element.
- **Policy HVWAP 20.2** Adhere to the flood proofing and flood protection requirements of Riverside County Ordinance No. 458.
- **Policy HVWAP 20.3** Require that proposed development projects that are subject to flood hazards, surface ponding, high erosion potential, or sheet flow be submitted to the Riverside County Flood Control and Water Conservation District for review.

The following are applicable goals and policies from the General Plan related to dam inundation:

- **Policy S 4.1** For new construction and proposals for substantial improvements to residential and nonresidential development in 100- and 500-year floodplains as mapped by FEMA or as determined by site-specific hydrologic studies for areas not mapped by FEMA the County shall apply a minimum level of acceptable risk; and disapprove projects that cannot mitigate the hazard to the satisfaction of the Building Official or other responsible agency.
- **Policy S 4.12** Encourage neighboring jurisdictions to require development occurring adjacent to the County to consider the impact of flooding and flood control measures on properties within unincorporated Riverside County.
- **Policy S 4.17** Utilize public land acquisition and other land use measures to create open space zoning inundation zones in areas that are destined for redevelopment. When this is not feasible, low density land uses shall be employed.
- **Policy S 4.18** Continue to assess and upgrade inundation risk and protection in the County.

4.10.3 Thresholds of Significance

As discussed in Section 4.10.1, the Project impacts to all criteria pertaining to hydrology and water quality will be analyzed. The Project would have a significant impact if it would:

24. Water Quality Impacts.

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?
d. Result in substantial erosion or siltation on-site or off-site?
e. Substantially increase the rate or amount of surface runoff in a manner which would

result in flooding on-site or off-site?
f. 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?
g. Impede or redirect flood flows?
h. In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?
i. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The questions posed in the County's IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential hydrology and water quality changes in the environment are addressed in response to the above thresholds in the following analysis.

4.10.4 Potential Impacts

TTM 37439 proposes the subdivision of 158.18 acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. Reference **Table 4.10-3**, ***TTM 37439 Specifics***. The proposed Project includes four (4) neighborhoods, with minimum lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft.

Lot 575 is an 8.96-acre park with the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. Lots 576, 579, 580, 582, 591, 594, and 604 are mini-parks/paseos.

The density of TTM 37439 is 3.6 dwelling units/acre. Reference **Figure 2-2***, **TTM 37439**,* provided previously in Chapter 2 of this DEIR. It is anticipated that TTM 37439 would be recorded in 4 phases.

Table 4.10-3
TTM 37439 Specifics

Type	Area (acres)	Number of Lots
Residential	79.54	574
Open Space	25.81	25
Drainage Basins	7.23	9
Project Roadways	45.60	--
TOTAL	**158.18**	**608**

Source: Initial Study (Subchapter 8.3 of this DEIR, *Initial Study*)

Temporary Drainage Channels: A total of five (5) temporary drainage channels will be provided for the Project. These are located along Craig Avenue and Eucalyptus Road ROWs. Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.

Regional Flood Control Channels

The proposed Project includes several regional flood control channels both within and outside the Project boundary. **Figure 4.10-6, *Menifee-Holland ADP Ultimate Flood Control Drainage***

System, identifies the facilities that are expected to be included (with other facilities) in a future Menifee Valley Drainage Plan/Area Drainage Plan (MDP/ADP) to be prepared by the Riverside County Flood Control and Water Conservation District (RCFC&WCD). The MDP will include the regional flood control facilities needed to address the primary flooding issues in the watershed. The ADP will provide a funding mechanism for the regional facilities based on development fees collected in the adopted ADP.

The MDP/ADP facilities proposed as part of the Project are described in further detail as follows:

1. A 620-foot long 14' by 8.5' box culvert that crosses Briggs Road and will drain into a Lake/Channel system proposed as part of Tract Map 31229. Please note that Tract map 37439 will have to construct an interim earthen channel, with a concrete low flow channel, bisecting Tract Map 31229, if the lake/channel system proposed as part of Tract Map 31229 is not in place. The interim earthen channel will be part of the future MDP/ADP in order to provide upstream property owners the potential to construct a system that will connect to the existing lake west of Southshore Drive.
2. The relocation of three high pressure gas lines that are 16", 24", and 30" in diameter for the installation of the box culvert crossing Briggs Road.
3. A trapezoidal earthen channel (Holland Channel) with a length of 5,400 feet that extends from Briggs Road to Leon Road. The channel will have an average bottom width of 100 feet and average depth of 8.5 feet. The channel will implement 4:1 side slopes, a concrete low flow channel, and two access roads resulting a total approximate width of 250 feet. This channel will require 230,000 cubic yards of material to be excavated.
4. Two (2) 14' by 7' reinforced concrete box culverts cross Leon Road, one is 450-feet long and the other is 300-feet long.
5. A trapezoidal earthen channel (Line A) with a length of 3,300 feet that extends from Leon Road at the downstream terminus will extend in a southeasterly direction toward the intersection of Craig Avenue and Eucalyptus Road. The channel will have an average bottom width of 50 feet and average depth of 7 feet. The channel will implement 4:1 side slopes, a concrete low flow channel, and two access roads resulting in a total approximate width of 146 feet. This channel will require 67,000 cubic yards of material to be excavated.
6. Two 8' by 6' RCB culverts 200-feet in length extend from Line A and cross Eucalyptus Road to intercept offsite flows from the southeasterly part of the watershed area. Two 48" RCP storm drains are proposed to collect flows near Craig Avenue and Eucalyptus Road and connect to the RCB.
7. A trapezoidal earthen channel (Line B) 1,100 feet in length extends north from the proposed Holland Channel at Leon Road adjacent to the easterly right-of-way of Leon Road. The channel's downstream terminus will begin at Leon Road and extend to the north side of Holland Road. The channel will have an average bottom width of 30 feet and average depth of 7 feet. The channel will implement 4:1 side slopes, a concrete low flow channel, and two access roads. This channel will require 17,000 cubic yards of material to be excavated.
8. A 1,000-foot long 84" RCP that extends from the proposed Line A Channel north along Eucalyptus Road is proposed in order to intercept offsite flows from a watershed area that extend northeasterly of the Eucalyptus Road Holland Road intersection.
9. A 2,000-foot long 54" RCP extending from the RCB crossing Leon Road toward will be required to intercept the offsite flows from a watershed area southeast of the Leon Road and Craig Avenue intersection. The storm drain will be located within Leon Road and extend 900 feet east along Craig Avenue.

10. A 200-foot long double 8' x 6' RCB extending north from the proposed Line B Channel and crossing Holland Road. The culvert will intercept the offsite flows northwest of the Leon Road and Holland Road intersection.

These Project components are discussed in greater detail, below. Reference **Figure 2-5, *Vicinity Map***, **Figure 2-3, *Aerial Photo with Project Components***, and **Figure 3-1, *Assessor's Parcel Map***, provided previously in Chapters 2 and 3 of this DEIR, for the locations of the Residential Project site components and the Off-site Project components.

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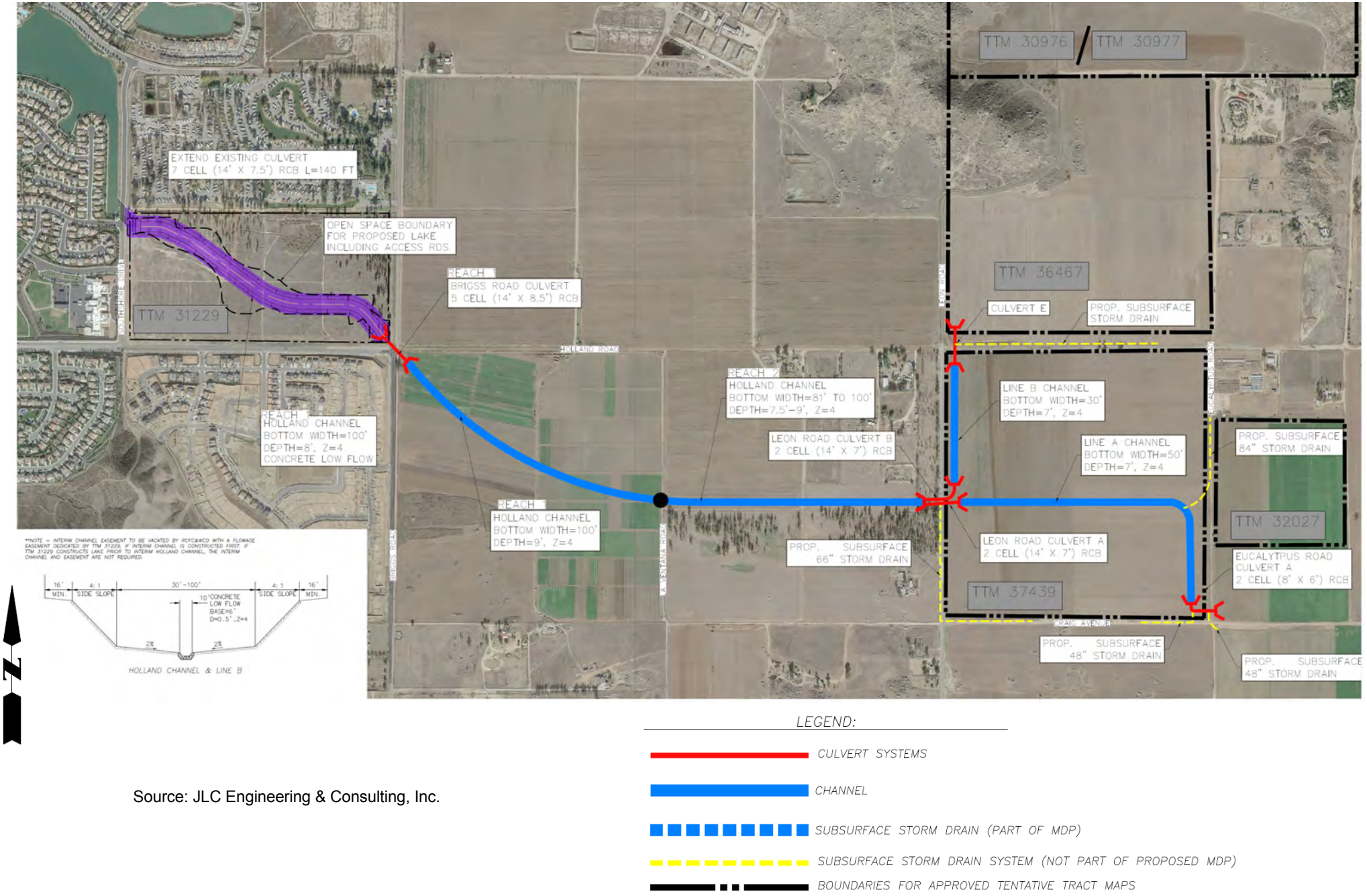
FIGURE 4.10-6
MENIFEE-HOLLAND ADP ULTIMATE FLOOD CONTROL DRAINAGE SYSTEM



Source: JLC Engineering & Consulting, Inc.

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As shown on **Figure 4.10-6**, the Project will construct a total of three regional flood control trapezoidal earthen channels (i.e. Holland Channel, Line A, and Line B) and roadway culverts that are expected to be included as part of a future MDP and ADP to be prepared by Riverside County Flood Control and Water Conservation District. The earthen trapezoidal channels within the Project limits (Lines A and B) will discharge via an underground reinforced concrete box (RCB) culvert crossing Leon Road to an offsite earthen trapezoidal channel (Holland Channel) that will extend from Leon Road and connect to a proposed RCB culvert crossing Briggs Road. Moreover, subsurface storm drain systems are required along Craig Avenue, Eucalyptus Road, Leon Road, and Holland Road to collect local drainage and provide flood protection for the proposed street improvements. The subsurface storm drain systems will not be part of the MDP/ADP.

The proposed culvert, which is a five barrel 14' wide x 8.5' high reinforced concrete box, crosses Briggs Road and discharges into the Lake/Channel system within approved Tentative Tract 31229. Tentative Tract 31229, which has been approved by the County and by the City of Menifee, will construct a private lake/channel system that will accept flows from the proposed culvert. The private lake varies in width from 150 feet to 425 feet. However, if TTM 31229 is not in place when TTM 37439 commences construction, an interim earthen channel will be constructed to ensure runoff is conveyed to the existing culverts crossing Southshore Drive.

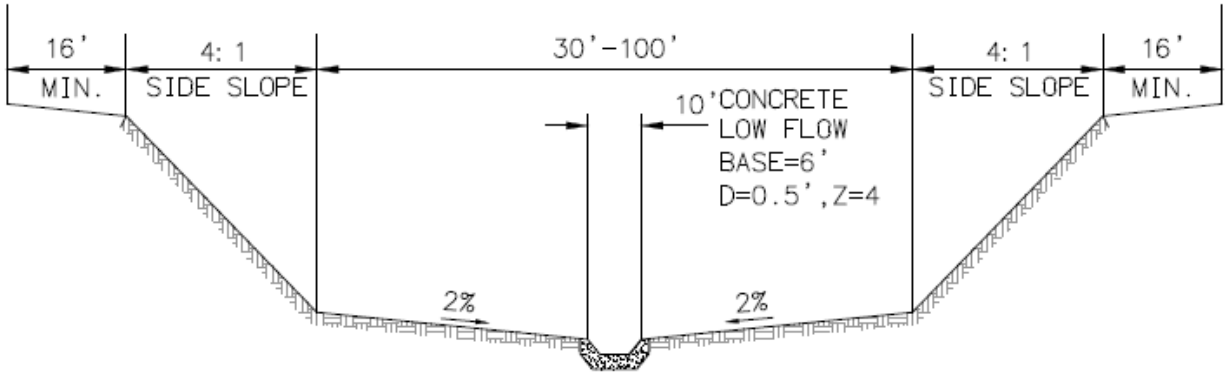
As part of this proposed Project, TTM 37439 will construct the proposed regional flood control channels including the trapezoidal earthen channels and RCB/RCP systems shown on **Figure 4.10-6**. Three total regional trapezoidal earthen channels (i.e. Holland Channel, Line A and Line B) require construction as part of TTM 37439. The three channels are approximately 9,800' in length and construction will require approximately 314,000 cubic yards of excavation. The trapezoidal earthen cannels will have 4:1 side slopes, a concrete low flow channel, depths varying from 6'-8', and a bottom width that varies from 30' to 100'. Reference **Figure 4.10-7**, ***Typical Earthen Channel Cross Section and Low Flow Cross Section***.

The flood control facilities proposed for the Project are for the purpose of public safety and flood protection for the area. Periodic maintenance of the flood control facilities is required in order to restore the facility to the original hydraulic conveyance, designed lines and grades. Standard maintenance activities will include sediment removal, vegetation management, erosion repair to access roads and side slopes. In addition to mowing or the use of other machinery, vegetation may also be managed by application of aquatic herbicides/pesticides or hand removal, if necessary. Typical machinery used to conduct maintenance activities includes graders, loaders, and/or long reach excavators that may require use of various attachments. Erosion along the side slopes and access road of the channel can usually be repaired by rolling and re-compacting the area with a loader or long reach excavator. Sediment removal is usually done through the use of a loader operating in the bottom of the channel or basin, or by using an excavator to remove sediment while working from an access roads or bank. Vegetation removal is typically done on an as needed basis once or twice a year, in order to maintain the designed hydraulic capacity. Slope repair and restoring lines and grades usually occurs on an as needed basis, but less frequently than vegetation removal.

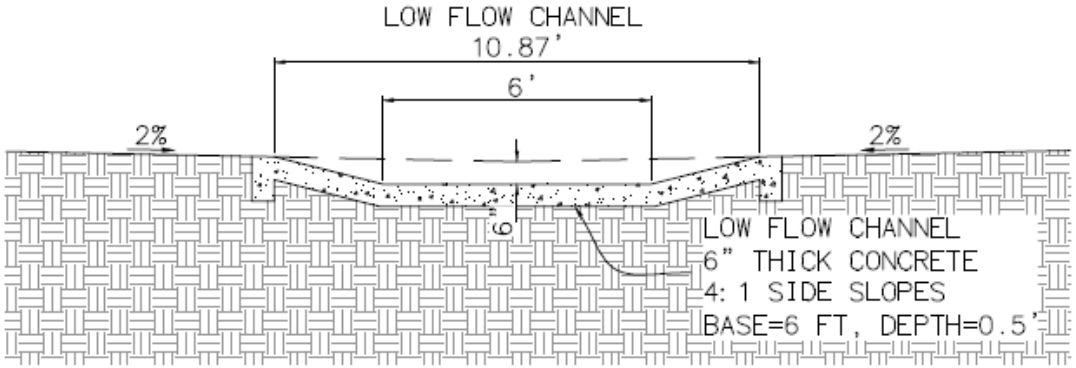
The proposed channels are not within areas that are currently under limits of environmental jurisdiction; as a result, permits to construct the channel are not required from US Army Corps of Engineers, California Fish & Wildlife, or the Regional Water Quality Control Board. However, the Project will be required to submit construction drawings to RCFC&WCD for approval and execute a cooperative agreement that will serve as a permit to allow the construction of the

channel. Prior to relinquishing the ownership and maintenance of the channel, the Project will meet the obligation outlined in the RCFCW&CD cooperative agreement for the channel system, including obtaining any permits necessary to operate and maintain the flood control facilities.

FIGURE 4.10-7
TYPICAL EARTHEN CHANNEL CROSS SECTION AND LOW FLOW CROSS SECTION



TYPICAL EARTHEN CHANNEL CROSS SECTION



LOW FLOW - CROSS SECTION

Source: JLC Engineering & Consulting, Inc.

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Drainage / Hydrology / Water Quality

The Project will construct two large channels that will traverse the Project, as well as subsurface storm drain and bioretention basins. The bioretention basins will treat for water quality purposes and discharge directly into one of the two channels. The Project site is not required to address the hydrologic conditions of concern (HCOC) or mitigate for increased runoff since the Project will construct the Holland Channel from Eucalyptus Avenue to Southshore Drive (which has an existing culvert that discharges into private lakes and ultimately to Salt Creek).

The Project site will construct the proposed Holland Channel (designated as Line A through the Project site) and Line B. The Holland Channel will be constructed from Eucalyptus Avenue to the existing culvert at Southshore Drive. This system will be a combination of box culverts and open channels that will be engineered, earthen channels with a low flow concrete channel. The drainage system will be maintained by RCFC&WCD. This system will discharge into a system that is designated as exempt from addressing the HCOC per the Riverside County Stormwater & Water Conservation Tracking Tool. Therefore, since the Project is proposing to extend the Holland Channel (a facility that is engineered, unlined, and maintained) to the Project site, the proposed Project will not create a hydrologic condition of concern.

The proposed Project site is relatively flat, with the main channel having slopes of 0.1% to 0.3% throughout the Project site. Due to the vertical constraints, the bioretention basins were limited to 18" of soil media, and the majority of the storm drain systems have slopes of 0.3%.

The off-site hydrology analysis utilized the ultimate condition land use to perform the analysis, since these flow rates would be used for the design of the Line A (Holland Channel) and Line B channel infrastructure systems. The offsite area consists of 6 watershed areas designated as Areas "A" through "F". Reference **Figure 4.10-8**, ***Ultimate Condition Off-Site Hydrology Map***. The post-Project condition onsite rational method hydrology analysis was performed for the 9 watershed areas, designated as areas "A" through "I". Areas "A" through "I" are the in-tract areas that include the half-street improvements within the perimeter streets surrounding the residential development. The area designations correspond to the downstream tributary basin. The rational method analysis utilized condominium land use (65% impervious) for the Project based upon the average lot sizes, and the basin areas were analyzed as 100% pervious. Reference **Figure 4.10-9**, ***Post Project Condition – On-Site Hydrology Map***.

The proposed Project will construct subsurface storm drain that will connect to two main channels traversing the Project site. During the preliminary stages, only the main channels (Lines A and B) include Water Surface Profile Gradient Program calculations. The remaining storm drain systems utilize friction slope calculations to size the systems. Systems connecting to Lines A and B utilize downstream water surface elevations obtained from the WSPG calculations. Systems discharging into the onsite basins utilize the 100-year water surface elevations determined by the basin outlet sizing calculations. The laterals utilize the water surface elevations determined by the mainline friction slope calculations. Reference **Figure 4.10-10**, ***Drainage Facilities Map***.

In addition to the Line A and Line B system, which are expected to be incorporated into a future MDP/ADP, three drainage system systems are required to collect offsite flows that enter the proposed Project. These facilities will not be part of the future MDP/ADP and have been designated as Lines 1, 2 and 3.

Line 1 connects to the double box system crossing Leon Road (Line A). It collects flows from Basin I, as well as the offsite area tributary to the south east corner of the Leon Road and Craig Avenue Intersection. The system ranges from 54" – 60", with a peak flow rate of 109 cubic feet per second (ft^3/s).

The Line 2 and Line 2A system connects to Line A at the upstream end (to the double box culvert crossing Eucalyptus Road). The system collects flows tributary to the south side of Craig Avenue at the east and west intersections of Craig Avenue and Eucalyptus Road. The pipe size ranges from 60" – 66", with a peak flow rate of 153 ft^3/s.

The Line 3 system collects flows tributary to the north east side of Eucalyptus Avenue and connects to the trapezoidal channel of the Line A system. Line 3 consists of a 6' high x 8' wide box culvert and an 84" RCP storm drain, and has a peak flow rate of 180 ft^3/s. The upstream box culvert of the Line A system was also analyzed, since the preliminary WSPG for the Line A system ended at the transition of the trapezoidal channel to the box culvert. Therefore, a friction slope analysis was performed for the upstream box portion.

The onsite storm drain systems were analyzed starting with the basin outlet pipes. The upstream water surface elevation for the basin outlet pipes were used to determine the weir flow line elevation. This weir flow line elevation could not be lower than 0.5 feet above the top of soil media within the basin to ensure that the water quality volume did not bypass the bioretention treatment. The basin outlet structures were then sized for the 100-year flow rate (as determined by the rational method hydrology calculations). The preliminary outlet structures were sized using the weir equation, and a weir coefficient equal to 3. The ponded depth of the 100-year flow rate on the outlet weirs was utilized as the downstream water surface elevation for the storm drains discharging into the basins.

The proposed Project will utilize bioretention basins to treat for water quality purposes. **Figure 4.10-11**, ***WQMP Site Plan***. The required water quality volume was determined by using the Santa Ana Watershed Best Management Practices Design Volume Spreadsheets. The effective impervious fraction was calculated based upon the tributary land use designations.

The bioretention basins have been designed so that the water quality volume will not pond higher than 6" above the soil media using the Bioretention Basin Design Spreadsheets. Flows in excess of the water quality volume will be conveyed through outlet structures within the basins that incorporate weir structures with flow line inverts at 6" above the soil media. The Riverside County Bioretention Facility – Design Procedure worksheets were utilized to size the Bioretention Basins, however, the bioretention basins are not rectangular shaped bioretention basins but are irregular shaped so the top width is the average width of the basins. All the bioretention basins have 18" of soil media and a minimum 12" of gravel due to the vertical constraints associated with the channel elevations traversing the Project. The bio-retention basins proposed for the Project are to be maintained by the CFD that will be formed as part of the Project approval process.

All onsite flows will discharge into the proposed channels that will be a part of the future MDP/ADP that will be owned and operated by RCFC&WCD. These proposed channels traverse the Project site and provide the area with regional flood protection.

Since the proposed Project will be required to construct the proposed regional flood control channel to the existing lake system in Menifee, the Project will be exempt from addressing the 1

HCOC. This is a result of the proposed Project having flood control facilities that will be engineered and maintained systems from the Project site to Canyon Lake.

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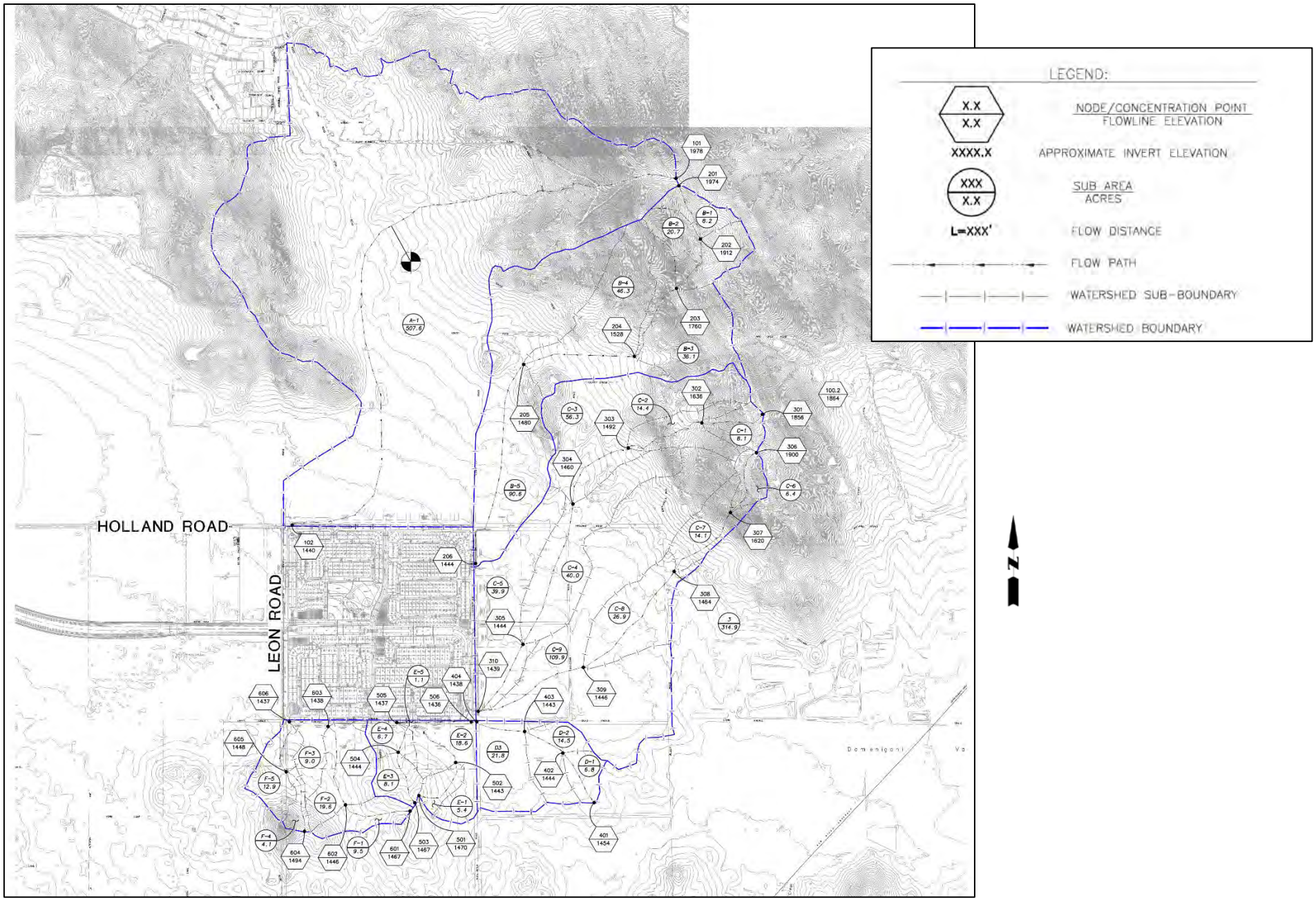
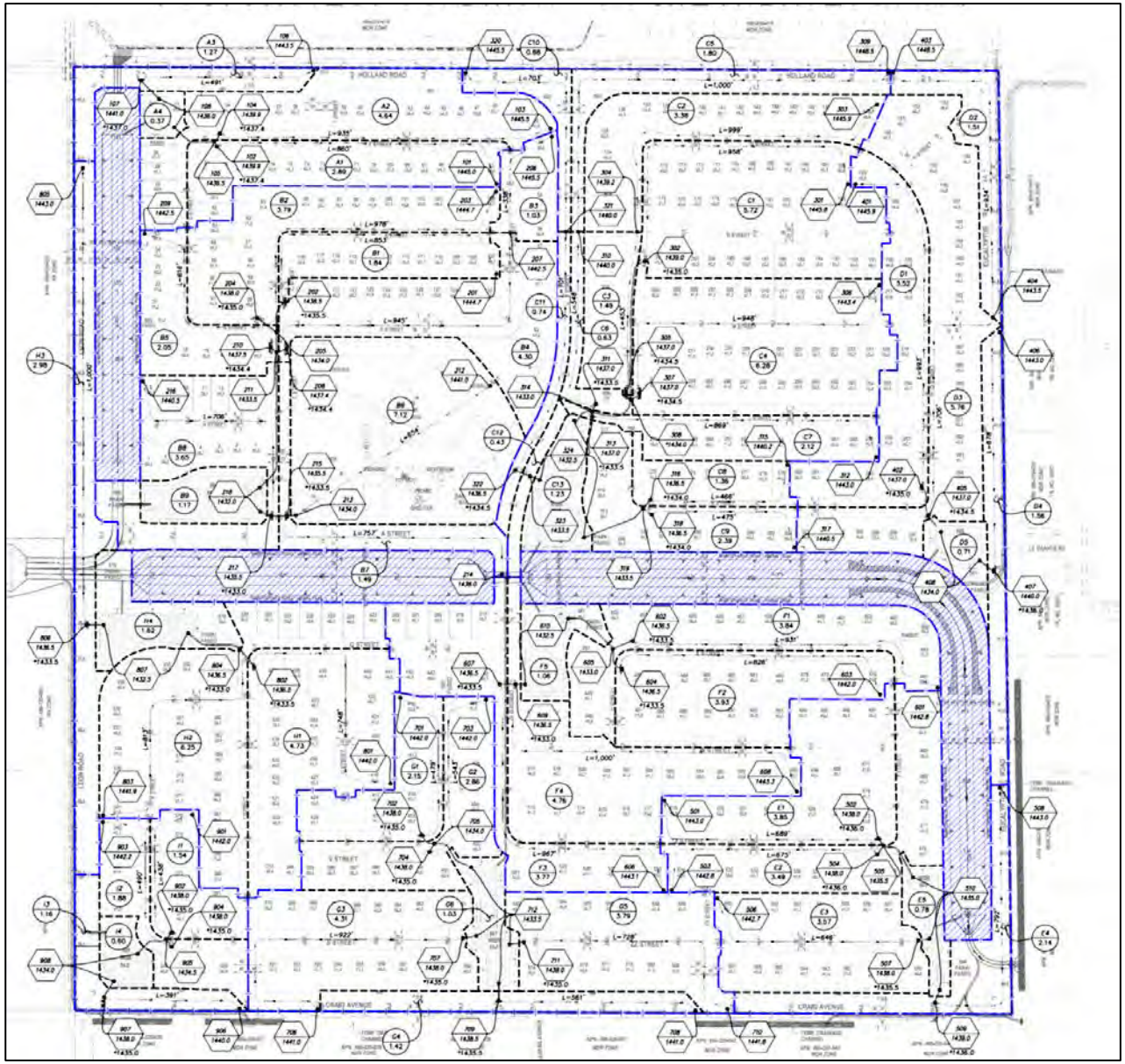
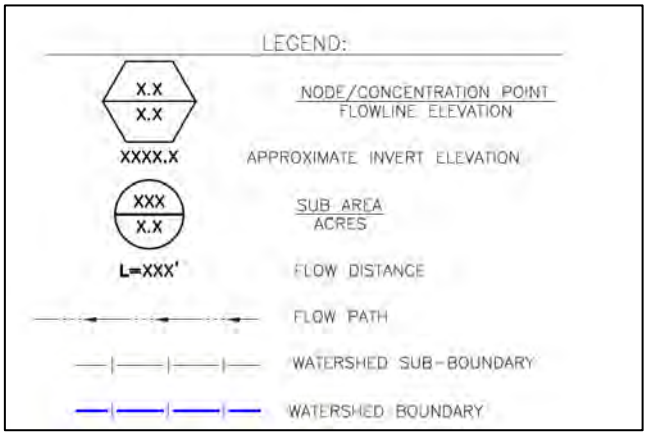
FIGURE 4.10-8
ULTIMATE CONDITION OFF-SITE HYDROLOGY MAP



Source: Subchapter 8.3 of this DEIR, Initial Study

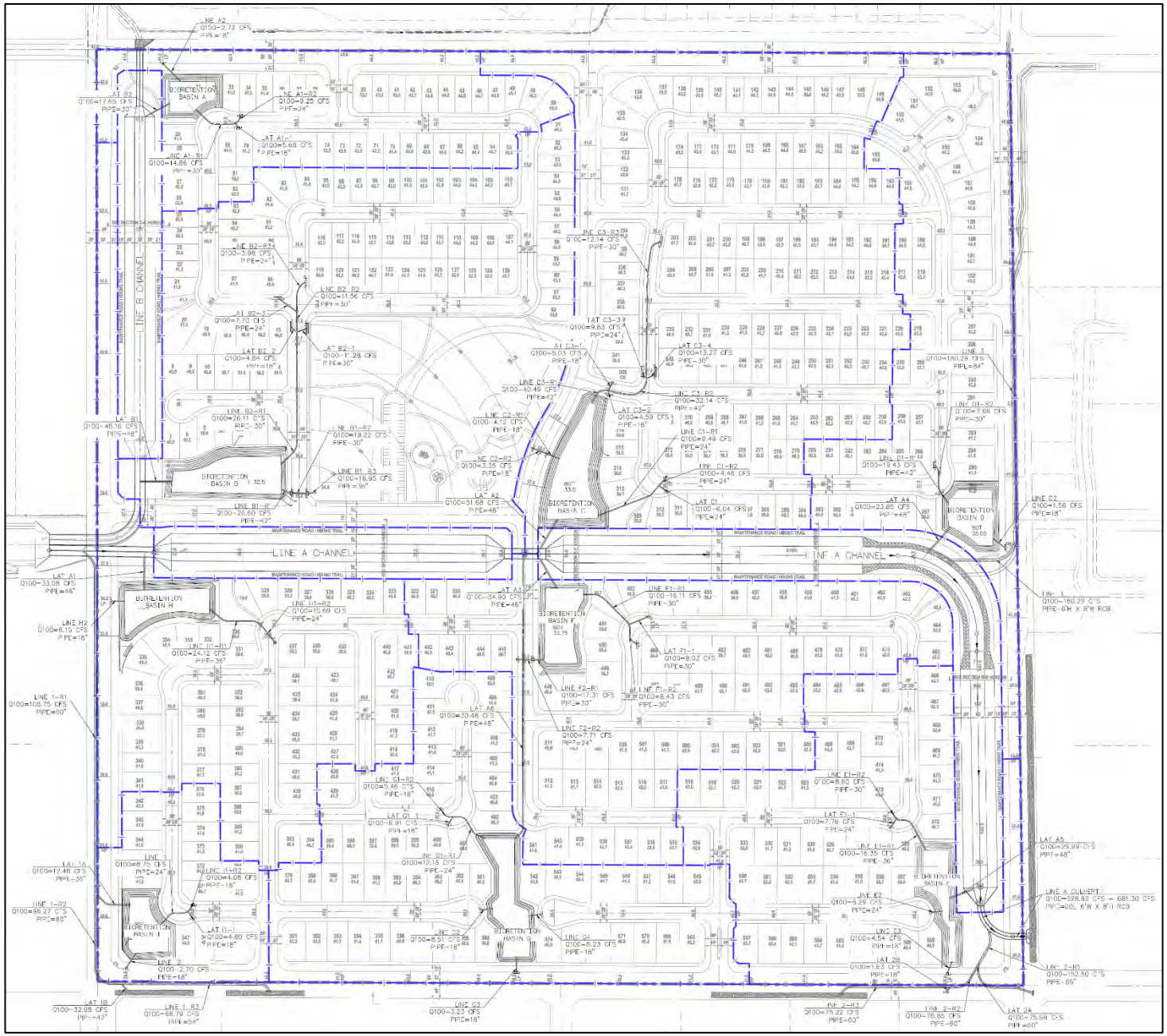
FIGURE 4.10-9
POST PROJECT CONDITION – ON-SITE HYDROLOGY MAP





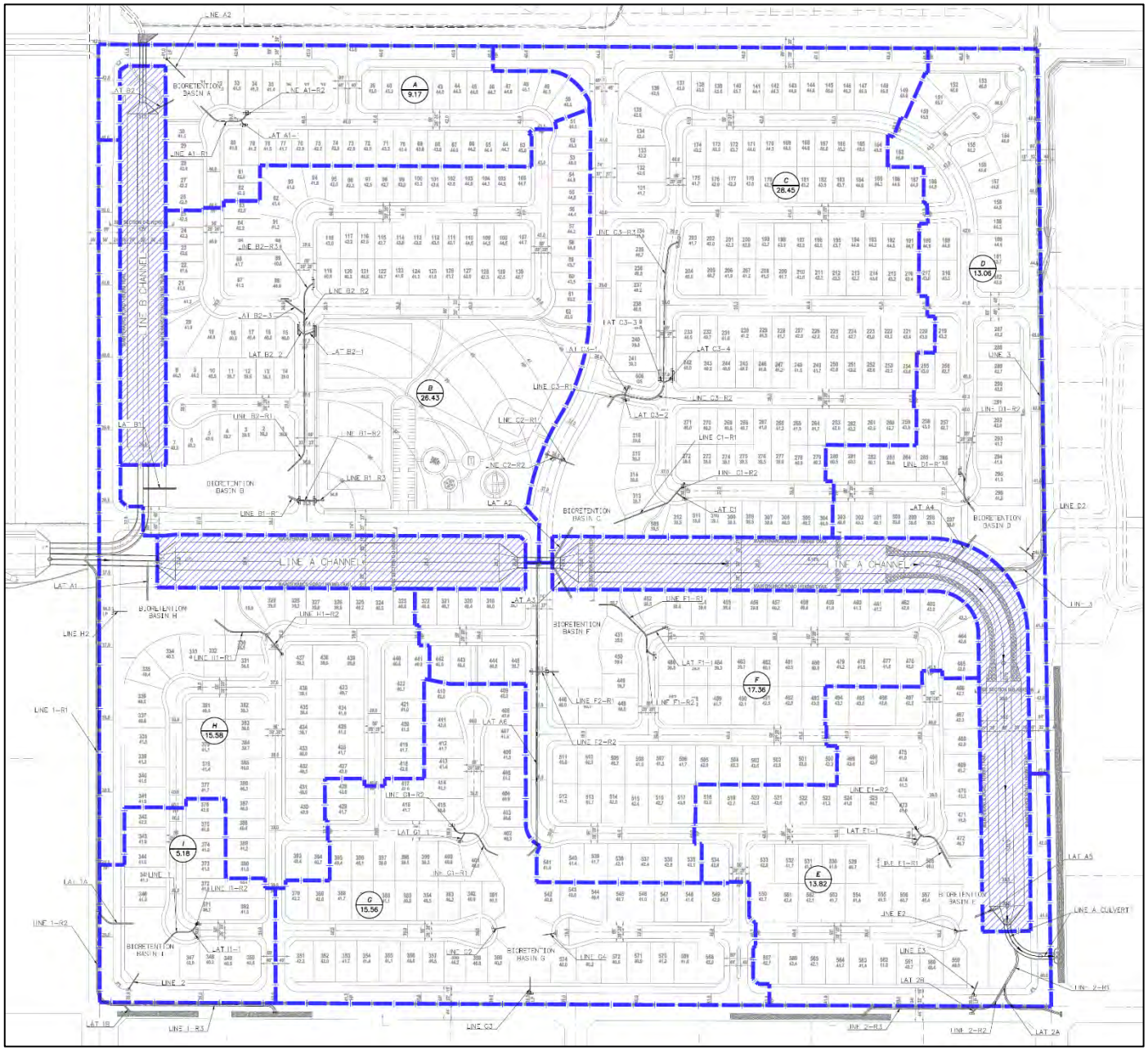
Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 4.10-10 DRAINAGE FACILITIES MAP



Source: Subchapter 8.3 of this DEIR, Initial Study

FIGURE 4.10-11
WQMP SITE PLAN



Source: Subchapter 8.3 of this DEIR, Initial Study

THRESHOLD 24.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

A project normally would have an impact on surface water quality if discharges associated with the project would create pollution, contamination, or nuisance as defined in Water Code Section 13050, or that cause regulatory standards to be violated as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for a receiving water body. For the purpose of this specific issue, a significant impact could occur if the Project would discharge water that does not meet the quality standards of the agencies which regulate surface water quality and water discharge into stormwater drainage systems. Significant impacts could also occur if the Project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include preparation of a Water Quality Management Plan (WQMP) to reduce potential post-construction water quality impacts.

Construction Impacts

Three general sources of potential short-term, construction-related stormwater pollution associated with the proposed Project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth-moving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment.

Operational Impacts

Proposed construction of the residential buildings will increase impervious areas by replacing the vacant property with associated paving and rooftops. Landscaping is proposed as part of Project design in the form of landscaped planters containing trees, shrubs, ground covers, and vines. The Project proponent has submitted a WQMP for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

The Project requires the preparation of a SWPPP for control of pollutants during construction and a WQMP for control of pollutants during occupancy of the Project site. The SWPPP shall be prepared and implemented for each phase of the Project in compliance with the requirements of the Construction General Permit. The City has adopted BMPs designed to control discharges of pollution during construction and occupancy that could cause a significant adverse impact to surface water quality. The SWPPP and WQMP must address the hydrologic conditions of concern by maintaining pre-development flows once the Project is developed and treatment of the surface runoff from the site before discharge to the Canyon Lake/Salt Creek. The protection of water quality and future runoff volumes will be accomplished by reducing, to the extent feasible, the amount of impervious surface and through on-site retention.

The BMPs for this Project, which will be included in either the SWPPP, or *WQMP* (as applicable), may include a combination of the following, as depicted below:

- Landscape swale;
- Landscape strip;
- Biofiltration (with underdrain);
- Extended Detention Basin;
- Sand Filter Basin;
- Infiltration Basin;
- Permeable Pavement;
- Bioretention (w/o underdrain); and/or
- Other BMPs, including Proprietary BMPs.

Standard Conditions SC-HYD-1 through **SC-HYD-3** are required in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are not considered unique mitigation under CEQA.

All wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant. **Standard Condition SC-HYD-4**, as outlined in Section 4.10.5, is required in order to ensure that the Project's potential impacts to water quality resources (waste discharge requirements) would remain less than significant. **Standard Condition SC-HYD-4** is not considered unique mitigation under CEQA.

Therefore, the Project will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts are less than significant.

THRESHOLD 24.b: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Less Than Significant Impact

If the Project removes an existing groundwater recharge area or substantially reduces runoff that results in groundwater recharge such that existing wells will no longer be able to operate, a potentially significant impact could occur.

The *Geo Evaluation* noted that no groundwater was encountered in any of the test pits that were excavated at the site to a maximum depth of 9 feet below existing grade or the borings that were excavated to 21 feet below existing grade. No groundwater was encountered by previous consultants in borings excavated to 50 feet below existing grade.

Project-related grading will not reach these depths and no disturbance of groundwater is anticipated. The proposed single-family residential building footprints, roadways and other hardscape will increase on-site impervious surface coverage thereby reducing the total amount of infiltration on-site.

The Project site will construct the proposed Holland Channel (designated as Line A through the Project site) and Line B. The Holland Channel will be constructed from Eucalyptus Avenue to the existing culvert at Southshore Drive. This system will be a combination of box culverts and open

channels that will be engineered, earthen channels with a low flow concrete channel. The drainage system will be maintained by RCFC&WCD. The open channels will allow for groundwater recharge.

The proposed Project site is relatively flat, with the main channel having slopes of 0.1% to 0.3% throughout the Project site. Due to the vertical constraints, the bioretention basins were limited to 18" of soil media, and the majority of the storm drain systems have slopes of 0.3%.

Based on this information, the Project will not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.; and the earthen channels will actually continue to allow groundwater recharge. Impacts will be less than significant.

THRESHOLD 24.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?

Less Than Significant Impact

There are no identified streams or rivers on the Project site. The proposed Project will utilize bioretention basins to treat for water quality purposes. **Figure 4.10-11**, ***WQMP Site Plan***. The required water quality volume was determined by using the Santa Ana Watershed Best Management Practices Design Volume Spreadsheets. The effective impervious fraction was calculated based upon the tributary land use designations.

A site drainage plan is required by the County and will be reviewed by the Riverside County Building and Safety Department and/or RCFC&WCD. At the completion of construction, the Project will consist of impervious surfaces, landscaped planters, and post-construction BMPs. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are required in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are not considered unique mitigation under CEQA.

Therefore, while the Project will result in minimal alterations to the existing drainage pattern, these changes do not represent any alteration to the overall general direction, and nature of these existing drainage patterns. Therefore, the Project will not 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. Impacts will be less than significant.

THRESHOLD 24.d: Would the Project result in substantial erosion or siltation on-site or off-site?

Less Than Significant Impact

A site drainage plan is required by the County and will be reviewed by the Riverside County Building and Safety Department and/or RCFC&WCD. Erosion and siltation reduction measure BMPs contained in the required SWPPP will be implemented during construction. At the completion of construction, the Project will consist of impervious surfaces, landscaped planters, and post-construction BMPs. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are required

in order to ensure that the Project's potential impacts to hydrology and water quality resources would remain less than significant. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are not considered unique mitigation under CEQA.

Therefore, the Project will not result in substantial erosion or siltation on-site or off-site. Impacts will be less than significant.

THRESHOLD 24.e: Would the Project substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?

Less Than Significant Impact

Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the Project would alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The potential exists for this to occur during both the construction and operational phases of the Project. The Project will be reviewed and conditioned by the RCFC&WCD, County Building Department, and County Transportation Department, to eliminate any potential impacts from changes to deposition, siltation, or erosion through site design, adherence to the requirements of the NPDES, and the preparation of a SWPPP, and a WQMP.

Water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System (NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as **Standard Conditions SC-HYD-1** through **Standard Condition SC-HYD-3**. These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

The Project contains drainage improvements that will serve to facilitate local and regional drainage. The Project will result in improvements that will benefit an area that is currently deficient in these facilities.

The Project site will create drainage conveyance devises that will ultimately end up at discharges into private lakes, Salt Creek, Canyon Lake and Lake Elsinore. According to the information contained in the *Project Specific Water Quality Management Plan*, prepared by JLC Engineering and Consulting, Inc. June 19, 2018 (*WQMP,* **Appendix I1)**, and the *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439, County of Riverside, California*, prepared by JLC Engineering & Consulting, Inc. June 19, 2018 (*HHS,* **Appendix I2)**, aside from the accumulations of water in the future detention basins, the proposed Project is not forecast to substantially change the amount of surface water in any water body, including during future storms up to the 100-year runoff volume.
Therefore, the Project will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site. Impacts will be less than significant.

THRESHOLD 24.f: Would the Project 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?

Less Than Significant Impact

Consistent with the discussion in Thresholds 24.a, and 24.c, potentially significant impacts could occur if development of the Project results in runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. With site design features which incorporate measures to control surface runoff, and the incorporation of **Standard Conditions SC-HYD-1** through **SC-HYD-4**, Project's potential impacts to hydrology and water quality resources (which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff) would remain less than significant.

THRESHOLD 24.g: Would the Project place impede or redirect flood flows?

Less Than Significant Impact

According to **Figure 4.10-5, *FEMA FIRM Map No. 06065C2090G***, the proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard. All runoff from the future developed site will be managed including future storms up to the 100-year storm. Based on these findings, the proposed Project can be implemented without exposing the Project to a significant flood hazard using the 100-year criterion. Therefore, the proposed Project will not impede or redirect flood flows in a manner that would result in significant adverse impacts to the environment. Impacts will be less than significant.

THRESHOLD 24.h: Would the Project, in flood hazard, tsunami, or seiche zones, risk the release of pollutants due to Project inundation?

Less Than Significant Impact

According to **Figure 4.10-5, *FEMA FIRM Map No. 06065C2090G***, the proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard. All runoff from the future developed site will be managed including future storms up to the 100-year storm. Based on these findings, the proposed Project can be implemented without exposing the Project to a significant flood hazard using the 100-year criterion.

Tsunamis are sea waves that are generated in response to large-magnitude earthquakes. When these waves reach shorelines, they sometimes produce coastal flooding. Seiches are the oscillation of large bodies of standing water, such as lakes, that can occur in response to ground shaking. Tsunamis do not pose hazards due to the inland location of the Project site.

According to the Safety Element, the Project site is not located in a special flood hazard area, therefore, seiches do not pose a hazard to the Project site.

Any impacts will be less than significant.

THRESHOLD 24.i: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact

Please reference the discussions in Thresholds 24.a, 24.b, 24.c, and 24.f.

Standard Conditions SC-HYD-1 through **SC-HYD-3** are required in order to ensure that the Project's potential impacts to hydrology and water quality resources, including a water quality control plan and/or sustainable groundwater management plan, would remain less than significant. **Standard Conditions SC-HYD-1** through **SC-HYD-3** are not considered unique mitigation under CEQA.

Based on this information, the Project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Any impacts are considered less than significant.

4.10.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Conditions SC-HYD-1 through **SC-HYD-4**, applicable to hydrology and water quality, are applicable to all Projects within the County and are not considered unique mitigation under CEQA.

SC-HYD-1 Site Drainage Plan. A site drainage plan is required by the County of Riverside and will be reviewed by the Building and Safety Department. The final grading and drainage plan will be approved by the Building and Safety Department during plan check review.

SC-HYD-2 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

SC-HYD-3 The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for

decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

SC-HYD-4 Wastewater. All wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant.

Mitigation Measure(s)

No Mitigation Measures are required.

4.10.6 Cumulative Impacts

The proposed Project has been evaluated as to whether it will have a potential to cause significant flood hazards and a potential to substantially degrade water quality onsite and downstream. **Standard Conditions SC-HYD-1** through **SC-HYD-4** and design measures to control the proposed Project's contributions to flood hazards and water quality degradation have been defined and are available to control future hydrology and water quality degradation to a less than significant impact level. With implementation of the proposed stormwater management design, as outlined in the Project Specific WQMPs, and **Standard Conditions SC-HYD-1** through **SC-HYD-4**, future stormwater runoff after development of the Project site is not forecast to make a cumulatively considerable contribution to downstream flood hazards and water quality in the Santa Ana River Watershed. This conclusion is based on the findings that the proposed **Standard Conditions SC-HYD-1** through **SC-HYD-4** and design measures will not increase runoff from the Project site and will provide adequate attenuation of water pollutants in runoff from this residential area so as not to make a cumulatively considerable contribution to the runoff volume or water pollution within the Santa Ana River Watershed. Project hydrology and water quality cumulative impacts are less than significant.

4.10.7 Unavoidable Significant Adverse Impacts

The proposed Project has a potential to result in generation of new pollutants from the proposed urban/suburban environment that can degrade water quality. However, through a combination of design measures included in the drainage design (Project Specific) and **Standard Conditions SC-HYD-1** through **SC-HYD-4**, these potential hydrology and water quality impacts can be controlled to a less than significant impact level. The proposed Project will not cause unavoidable significant hydrology or water quality impacts. Project hydrology and water quality impacts are less than significant.

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4.11 LAND USE AND PLANNING

4.11.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of land use and planning from implementation of the Project. The Land Use and Planning Section, of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

26. Land Use.
- a. Result in a substantial alteration of the present or planned land use of an area?
- b. Affect land use within a city sphere of influence and/or within adjacent city or county boundaries?

27. Planning.
- a. Be consistent with the site's existing or proposed zoning?
- b. Be compatible with existing surrounding zoning?
- c. Be compatible with existing and planned surrounding land uses?
- d. Be consistent with the land use designations and policies of the Comprehensive General Plan (including those of any applicable Specific Plan)?
- e. Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?

Based on the analysis in the IS it was determined that the question pertaining to issue area 26.b., related to land use and planning (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to this question, the IS identified "no impact" to this issue area, as a result of implementation of the Project.

Based on the analysis in the IS, the remaining six (6) issue areas 26.a. and 27.a. through 27.e., related to land use and planning in the questions asked above, **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The 27. Planning heading and issue areas 27.a through 27.d were deleted. 27.e will now become 26.b; the prior 26.b was deleted. 26.a was deleted, and new text was added. These revisions will be reflected in the DEIR.

Therefore, the following two (2) issue areas will be analyzed in the DEIR:

26. Land Use.
- a. 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?
- b. Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?

No standard conditions or mitigation measures were presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- The *Riverside County General Plan (Land Use Element)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- The *Sun City/Menifee Valley Area Plan (SCMVAP)* https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- The *Harvest Valley/Winchester Area Plan (HVWAP)* https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633
- Southern California Association of Governments Website: http://www.scag.ca.gov/about/Pages/Home.aspx
- 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (*2016 RTP/SCS*) http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf
- SCAG Sustainability Planning Grant Website: http://sustain.scag.ca.gov/Pages/Grants%20and%20Local%20Assistance/GrantsLocalAssistance.aspx
- Western Riverside Council of Governments Website http://www.wrcog.cog.ca.us
- 2016 RTP/SCS Final PEIR – Section 3.11 Land Use and Planning http://scagrtpscs.net/Documents/2016/peir/draft/2016dPEIR_3_11_LandUseandPlanning.pdf

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter # 6: Southern California Association of Governments (dated 11/7/18):

This letter contains comments pertaining to transportation, air quality, and land use compatibility impacts:

- Southern California Association of Governments (SCAG) is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities.
- SCAG reviews EIRs for Projects of regional significance for consistency with regional plans pursuant to CEQA and the CEQA Guidelines.
- SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for the preparation of the Regional Transportation Plan (RTP), including the Sustainable Communities Strategy (SCS).
- SCAG has reviewed the NOP for the Project.
- SCAG asks that environmental documentation be mailed to SCAG's office in Los Angeles or emailed to the contact information in the letter.
- The Lead Agency has the sole discretion in determining a local project's consistency with the RTP/SCS.
- SCAG recommends using SCAG's 2016 RTP/SCS Goals to analyze the Project in a side-by-

side comparison to determine whether the Project is consistent, inconsistent or in-applicable with the regional goals.

- A wide range of land use and transportation strategies are included in the 2016 RTP/SCS.
- Adopted demographics and growth forecasts (population, households and employment) are provided for the SCAG Region and for unincorporated Riverside County for the years 2020, 2035, and 2040.
- The Final Program EIR for the 2016 RTP/SCS includes a list of project-level performance standards-based mitigation measures that are applicable and feasible. These mitigation measures may be considered by the County for adoption and implementation.
- Project-level mitigation measures are the responsibility and within the authority/jurisdiction of the County as Lead Agency to meet the performance standards for each of the CEQA resource categories.

Response: As side-by-side comparison of SCAG's 2016 RTP/SCS Goals with discussions of the consistency, non-consistency, or non-applicability of the goals and supportive analysis in a table format (recommend by SCAG) is provided below in Threshold 27.d. The purpose of the 2016 RTP/SCS strategies paragraph in this comment letter was to inform the lead agency (City) of the strategies within the document. If the Project is consistent with the RTP/SCS goals; therefore, at least one or more of the strategies can apply to the Project. It should be noted that these strategies are provided as guidance to lead agencies when the Project is under consideration. Only one Final PEIR for the 2016 RTP/SCS mitigation measure is applicable to the Project. Please refer to the discussion below.

No comments regarding land use and planning resources were received at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 26.a, 26.b, and the issues identified in the NOP/IS are the focus of the following evaluation of land use and planning.

4.11.2 Environmental Setting

Regional access to the Project vicinity is provided to the general area in a north-south direction by the Interstate 215 (I-215) freeway and by Highway 79, and State Route 74 in an east-west direction.

The proposed Project is located in the eastern portion of the Menifee Valley, one of the many tectonically controlled valleys within the valley-and-ridge systems found in the Perris Block. These structurally depressed troughs are filled with non-marine sediments of upper Pliocene through recent age, while the ridges are typically composed of plutonic igneous rocks, metasedimentary rocks, and late-stage intrusive dikes.

The Perris Block is defined as a region between the San Jacinto and Elsinore-Chino fault zones, bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley. It is considered to have been active since Pliocene time. The Project area lies across the level valley floor, away from the flanks of any of the ridge systems. In this area, the valley trends nearly east-west and is likely to be more erosional than tectonic in origin.

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads.

The site of the proposed offsite trapezoidal earthen drainage channel lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Southshore Drive at the west. The proposed trapezoidal earthen drainage channel bounded at east by Eucalyptus Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Southshore Drive. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the channel ROW, Briggs Road, and Tres Lagos Road ROWs. All three of these have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

As shown above, existing land uses are agricultural, vacant, or large lot single-family residential, and planned surrounding land uses are residential, with varying degrees of density potential.

4.11.2.1 State Regulations

State Planning Law

State planning law (California Government Code Section 65300) requires every planning agency in California (in this case, the County) and the corresponding legislative body to adopt a comprehensive, long-term general plan for the physical development of the land within its jurisdiction, and of any land outside its boundaries (sphere of influence) that bears relation to its planning. A general plan should consist of an integrated and internally consistent set of goals and policies grouped by topic into a set of elements and guided by a Countywide vision. State law requires that a general plan address seven elements or topics (land use, circulation, housing, conservation, open space, noise, and safety) but allows some discretion on the arrangement and content of the material.

4.11.2.2 Regional and Local

Southern California Association of Governments (SCAG)

Founded in 1965, the Southern California Association of Governments (SCAG) is a Joint Powers Authority under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law,

SCAG is designated as a Metropolitan Planning Organization (MPO) and under state law SCAG is designated as a Regional Transportation Planning Agency and as a Council of Governments.

The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. The Agency develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and a portion of the South Coast Air Quality management plans. In 1992, SCAG expanded its governing body, the Executive Committee, to a 70-member Regional Council to help accommodate new responsibilities mandated by the federal and state governments, as well as to provide more broad-based representation of Southern California's cities and counties. With its expanded membership structure, SCAG created regional districts to provide for more diverse representation. The districts were formed with the intent to serve equal populations and communities of interest. Currently, the Regional Council consists of 86 members.

In addition to the six counties and 191 cities that make up SCAG's region, there are six County Transportation Commissions that hold the primary responsibility for programming and implementing transportation projects, programs and services in their respective counties. Additionally, SCAG Bylaws provide for representation of Native American tribes and Air Districts in the region on the Regional Council and Policy Committees.

Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS). The Plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The Plan charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It outlines more than $556.5 billion in transportation system investments through 2040. The Plan was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

Sustainability Planning Grant Program

The Sustainability Planning Grant Program (formerly known as Compass Blueprint Grant Program) was established as an innovative vehicle for promoting local jurisdictional efforts to test local planning tools. Since starting in 2005, 133 projects have been completed through the program, with another 69 projects to be completed by the end of 2016. By supporting exemplary projects, the Sustainability Planning Grants Program illustrates the value effective growth planning can bring to our regional partners and the region as a whole.

The Sustainability Planning Grants Program provides direct technical assistance to SCAG member jurisdictions to complete planning and policy efforts that enable implementation of the regional SCS. Grants are available in the following three categories:

- Integrated Land Use – Sustainable Land Use Planning, Transit Oriented Development (TOD) and Land Use & Transportation Integration.
- Active Transportation – Bicycle, Pedestrian and Safe Routes to School Plans.
- Green Region – Natural Resource Plans, Climate Action Plans (CAPs) and Green House Gas (GHG) Reduction programs.

Western Riverside Council of Governments

Councils of Governments (COGs) are voluntary associations that represent member local governments, mainly cities and counties, that seek to provide cooperative planning, coordination, and technical assistance on issues of mutual concern that cross jurisdictional lines. In this sense, COGs serve to develop consensus on many issues that need to be addressed in a subregional or regional context. If properly structured, COG duties complement and do not duplicate jurisdictional activities, and serve to unify jurisdictions and agencies on matters of mutual concern, but independent of the responsibilities traditionally exercised by the individual members within their own communities.

Jurisdictions typically agree to form COGs following discussion and negotiation on common goals and objectives, which are usually consummated by execution of a Joint Powers Agreement (JPA). In most cases, adoption of a JPA is specifically authorized by state law. In the case of California, JPA authority is granted under Section 6500 et. seq. of the Government Code.

The Western Riverside Council of Governments (WRCOG) is a joint-powers agency that conducts interagency regional coordination and planning for local governments in western Riverside County and serves as the council of governments and local transportation planning agency for the western Riverside subregion of SCAG. Its member agencies are 18 cities, including the Riverside County, City of Menifee, Eastern and Western Municipal Water Districts, and the Morongo Band of Mission Indians. WRCOG administers County Measure A, the half-cent transportation sales tax that supports freeway construction projects and designates smaller revenue allocations for arterial roadway improvements in western Riverside County. WRCOG also administers the County's Transportation Uniform Mitigation Fee (TUMF) Program to mitigate the cumulative regional impacts of new development on those arterial highways identified on the Regional System of Highways and Arterials. At the time of this writing the TUMF fee is $8,873 per single family residential dwelling unit. Payment of TUMF is a standard condition and is not considered unique mitigation under CEQA.

Recognizing that many issues related to growth are not constrained by political boundaries, WRCOG focuses on a number of regional matters important to the County's future. By working together through its committee structure and utilizing resources, WRCOG is cost-effective by reducing duplication of effort, facilitating information sharing, enabling strong advocacy and strengthening western Riverside's standing in the region and the State. WRCOG's program areas are varied and include transportation, environment, energy, economy, and health.

Multiple Species Habitat Conservation Plan (MSHCP)/MSHCP Plan Fees

On June 17, 2003 the Riverside County Board of Supervisors approved the MSHCP, certified the EIR/EIS for the MSHCP, and authorized the Chairman to sign the Implementing Agreement. The County, a signatory to the Implementing Agreement (IA), is required to comply with all applicable policies and requirements of the MSHCP.

The MSHCP provides for the assembly of a Conservation Area consisting of Core Areas and Linkages for the conservation of Covered Species. Covered Species include 146 species of plants and animals of various federal and state listing statuses. The Conservation Area is to be assembled from portions of the MSHCP Criteria Area, which consists of one quarter-section (160 acres) of Criteria Cells, each cell designated with specific criteria for species conservation.

The MSHCP requires project sites located within designated plant and animal survey areas to conduct focused surveys for certain plant and animal species when potential suitable habitat is present. The MSHCP also requires that an assessment be completed to determine the effects of the project on riparian/riverine areas and vernal pools (if a project is located in proximity to an MSHCP Conservation Area which may result in edge effects that could adversely affect biological resources within the MSHCP Conservation area). These edge effects must be addressed according to the Urban/Wildlands Interface Guidelines (MSHCP Section 6.1.4).
As outlined in Section 6 of the MSHCP, "Payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under CEQA, National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife and/or any other appropriate participating regulatory agencies and as set forth in the Implementing Agreement for the MSHCP."

The Western Riverside County Multiple Species Habitat Conservation Plan Mitigation Fee has been established to provide mitigation for biological impacts from projects within the MSHCP area. All building permit applicants may pay their Western Riverside County MSHCP mitigation fees at any time after having an approved land development permit for the County of Riverside Planning Division (ex: conditional use permit, public use permit, plot plan) and have also paid for building permit plan review or permit fees.

Payment of this fee is a standard condition (see **Standard Condition SC-BIO-1** in Section 4.11.5) and is not considered unique mitigation under CEQA.

Stephens' Kangaroo Rat Habitat Conservation Plan/Ordinance No. 663.10

The proposed Project is located within the boundary of the Habitat Conservation Plan (HCP) for the endangered Stephens' kangaroo rat (SKR) implemented by the Riverside County Habitat Conservation Agency (RCHCA). The SKR HCP mitigates impacts from development on the SKR by establishing a network of preserves and a system for managing and monitoring them. Through implementation of the SKR HCP, more than $45 million has been dedicated to the establishment and management of a system of regional preserves designed to ensure the persistence of SKR in the plan area. This effort has 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.

The County adopted Ordinance Amendment 663.10, amending Ordinance No. 663, which established the Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan Fee Assessment Area and established mitigation fees. The mitigation fees are as follows: All applicants for development permits within the boundaries of the Fee Assessment Area who cannot satisfy mitigation requirements through on-site mitigation as determined through the environmental review process shall pay a Mitigation Fee of $500.00 per gross acre of parcels proposed for development. However, for single-family residential development, wherein all lots within the development are greater than one-half (1/2) acre in size, a Mitigation Fee of $250.00 per residential unit shall be paid; and for agricultural development which requires a development permit excluding the construction of single-family residences in connection with said agricultural development, a Mitigation Fee of $100.00 or one percent (1%) of the valuation of the buildings to be constructed, whichever is greater, shall be paid, provided that at no time shall such fee exceed the amount required to be paid if a fee of $500.00 per gross acre were applied to the parcel proposed for agricultural development. The determination of value or valuation of an agricultural building shall be made by the building official.

Payment of this fee is a standard condition (see **Standard Condition SC-BIO-2** in Section 4.11.5) and is not considered unique mitigation under CEQA.

County General Plan

Following are the applicable General Plan Policies regarding land use and planning:

- **Policy LU 2.1** Accommodate land use development in accordance with the patterns and distribution of use and density depicted on the General Plan Land Use Map and the Area Plan Land Use Maps, in accordance with the following.
  a. Provide a land use mix at the countywide and area plan levels based on projected need and supported by evaluation of impacts to the environment, economy, infrastructure, and services.
  b. Accommodate a range of community types and character, from agricultural and rural enclaves to urban and suburban communities.
  c. Provide for a broad range of land uses, intensities, and densities, including a range of residential, commercial, business, industry, open space, recreation, and public facilities uses.
  d. Concentrate growth near community centers that provide a mixture of commercial, employment, entertainment, recreation, civic, and cultural uses to the greatest extent possible.
  e. Concentrate growth near or within existing urban and suburban areas to maintain the rural and open space character of Riverside County to the greatest extent possible.
  f. Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.
- **Policy LU 3.1** Accommodate land use development in accordance with the patterns and distribution of use and density depicted on the General Plan Land Use Maps (Figure LU-1) and the Area Plan Land Use Maps in accordance with the following concepts:
  a. Accommodate communities that provide a balanced mix of land uses, including employment, recreation, shopping, public facilities and housing.
  b. Assist in and promote the development of infill and underutilized parcels which are

located in Community Development areas, as identified on the General Plan Land Use Map.

c. Create street and trail networks that directly connect local destinations, and that are friendly to pedestrians, equestrians, bicyclists, and others using non-motorized forms of transportation.

- **Policy LU 3.2** Use open space, greenways, recreational lands, and watercourses as community separators.
- **Policy LU 3.3** Promote the development and preservation of unique communities in which each community exhibits a special sense of place and quality of design.
- **Policy LU 4.1** Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:
  a. Compliance with the design standards of the appropriate area plan land use category.
  b. Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations.
  c. Require that an appropriate landscape plan be submitted and implemented for development projects subject to discretionary review.
  d. Require that new development utilize drought tolerant landscaping and incorporate adequate drought-conscious irrigation systems.
  e. Pursue energy efficiency through street configuration, building orientation, and landscaping to capitalize on shading and facilitate solar energy, as provided for in Title 24 Part 6 and/or Part 11, of the California Code of Regulations.
  f. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought tolerant landscaping, and water recycling, as appropriate.
  g. Encourage innovative and creative design concepts.
  h. Encourage the provision of public art that enhances the community's identity, which may include elements of historical significance and creative use of children's art.
  i. Include consistent and well-designed signage that is integrated with the building's architectural character.
  j. Mitigate noise, odor, lighting, and other impacts on surrounding properties.
  k. Provide and maintain landscaping in open spaces and parking lots.
  l. Include extensive landscaping.
  m. Require that new development be designed to provide adequate space for pedestrian connectivity and access, recreational trails, vehicular access and parking, supporting functions, open space, and other pertinent elements.
  n. Design parking lots and structures to be functionally and visually integrated and connected.
  o. Site buildings access points along sidewalks, pedestrian areas, and bicycle routes, and include amenities that encourage pedestrian activity.
  p. Establish safe and frequent pedestrian crossings.
  q. Recognize open space, including hillsides, arroyos, riparian areas, and other natural features as amenities that add community identity, beauty, recreational opportunities, and monetary value to adjacent developed areas.
  r. Manage wild land fire hazards in the design of development proposals located adjacent to natural open space.
- **Policy LU 4.2** Require property owners to maintain structures and landscaping to a high standard of design, health, and safety through the following:
  a. Provide proactive code enforcement activities.
  b. Promote programs and work with local service organizations and educational

institutions to inform residential, commercial, and industrial property owners and tenants about property maintenance methods.

c. Promote and support community and neighborhood-based efforts for the maintenance, upkeep, and renovation of structures and sites.

- **Policy LU 5.1** Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.
- **Policy LU 7.3** Consider the positive characteristics and unique features of the project site and surrounding community during the design and development process.
- **Policy LU 9.5** In conjunction with the CEQA review process, evaluate the potential for residential projects not located within existing parks and recreation districts or County Service Areas (CSAs) that provide for neighborhood and community park development and maintenance to be annexed to such districts or CSAs, and require such annexation where appropriate and feasible.
- **Policy LU 10.1** Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.
- **Policy LU 11.5** Ensure that all new developments reduce Greenhouse Gas emissions as prescribed in the Air Quality Element and Climate Action Plan.
- **Policy LU 13.6** Require that adequate and accessible circulation facilities exist to meet the demands of a proposed land use.
- **Policy LU 13.7** Review projects for consistency with Riverside County's Transportation Demand Ordinance.
- **Policy LU 14.8** Avoid the blocking of public views by solid walls.
- **Policy LU 18.1** Ensure compliance with Riverside County's water-efficient landscape policies. Ensure that projects seeking discretionary permits and/or approvals develop and implement landscaping plans prepared in accordance with the Water-Efficient Landscape Ordinance (Ordinance No. 859), the County of Riverside Guide to California Friendly Landscaping and Riverside County's California Friendly Plant List. Ensure that irrigation plans for all new development incorporate weather-based controllers and utilize state-of-the-art water-efficient irrigation components.
- **Policy LU 18.3** Design and field check irrigation plans to reduce run-off. Emphasize the use of subsurface irrigation techniques for landscape areas adjoining non-permeable hardscape. Utilize subsurface irrigation or other low volume irrigation technology in association with long, narrow, or irregularly shaped turf areas. Minimize use of irregularly shaped turf areas.
- **Policy LU 25.2** Provide for a balanced distribution of recreational amenities.
- **Policy LU 25.3** Require that park facilities be accessible to the community, regardless of age, physical limitation or income level.
- **Policy LU 25.4** Require that new development meet or exceed the parkland requirements as established in the Quimby Act and Riverside County enabling ordinances.
- **Policy LU 28.1** Accommodate the development of single- and multi-family residential units in areas appropriately designated by the General Plan and area plan land use maps.
- **Policy LU 28.3** Require that adequate and available circulation facilities, water resources, and sewer facilities exist to meet the demands of the proposed residential land use.
- **Policy LU 28.5** Integrate a continuous network of parks, plazas, public squares, bicycle trails, transit systems, and pedestrian paths into new communities and developments to provide both connections within each community and linkages with surrounding features and communities.
- **Policy LU 28.6** Require setbacks and other design elements to buffer residential units to the

extent possible from the impacts of abutting agricultural, roadway, commercial, and industrial uses.

- **Policy LU 28.10** Require that residential units/projects be designed to consider their surroundings and to visually enhance, not degrade, the character of the immediate area.

Highway 79 Policy Area

The Highway 79 Policy Area contains Policies relevant to the Project that duplicate *SCMVAP* 1.1, 2.3, and 5.1**,** above.

- **Policy HVWAP 9.1** Require development to adhere to standards detailed in the Design Standards and Guidelines for Development in the Third and Fifth Supervisorial Districts.

Sun City/Menifee Valley Area Plan (SCMVAP)

Highway 79 Policy Area

The Project site is located in the Highway 79 Policy Area. The purpose of this Policy Area is to address transportation infrastructure capacity in the policy area.

- **Policy SCMVAP 1.1** Accelerate the construction of transportation infrastructure in the Highway 79 corridor between Temecula, Hemet, San Jacinto and Banning. The County of Riverside shall require that all new development projects demonstrate adequate transportation infrastructure capacity to accommodate the added traffic growth. The County of Riverside shall coordinate with cities in the Highway 79 corridor to accelerate the usable revenue flow of existing funding programs, thus expediting the development of the transportation.
- **Policy SCMVAP 1.2** Maintain a program in the Highway 79 Policy Area to ensure that overall trip generation does not exceed system capacity and that the system operation continues to meet Level of Service standards. In general, the program would establish guidelines to be incorporated into individual Traffic Impact Analyses that would monitor overall trip generation from residential development to ensure that overall within the Highway 79 Policy Area development projects produce traffic generation at a level that is 9% less than the trips projected from the General Plan traffic model residential land use designations. Individually, projects could exceed the General Plan traffic model trip generation level, provided it can be demonstrated that sufficient reductions have occurred on other projects in order to meet Level of Service standards.
- **Policy SCMVAP 3.1** Adhere to development standards established in the Development Design Standards and Guidelines for the Third and Fifth Supervisorial Districts.
- **Policy SCMVAP 6.1** Projects proposing residential developments at densities exceeding two dwelling units per acre shall provide transitional buffers wherever such projects are located adjacent to, or on the opposite side of a street from, either (a) improved properties one acre or larger in area or (b) land that is designated Rural Community or Rural, in order to ensure adequate protection for residents who desire to maintain Rural Community or Rural uses, including animal- keeping uses. Such transitional buffers shall not include block walls unless such block walls are otherwise required by Ordinance No. 348 or by design guidelines, or for noise mitigation or protection from natural hazards. Transitional buffers may include the use of larger lot sizes (for example, the use of one-acre lots adjacent to or across the street from such lots), an open space corridor, trails, paseos, and/or screening

landscaping. The use of wrought iron or open fencing is encouraged in such buffer transition areas.

- **Policy SCMVAP 8.1** Implement the Trails and Bikeway System, Figure 7, as discussed in the Nonmotorized Transportation section of the Circulation Element.

Harvest Valley/Winchester Area Plan (HVWAP)

The Harvest Valley/Winchester Area Plan contains policies that implement the County Vision shaped to fit the terrain and conditions in the Harvest Valley/Winchester planning area. This Area is at a crossroads because it contains the east-west running State Route 74, the north-south running State Route 79, major transportation corridors that influence the region. The Area also contains The Diamond Valley Lake, the largest fresh water lake in Southern California. Policies in the Area Plan are intended to enhance and/or preserve the identity and the unique character of the Area at the local level.

4.11.3 Thresholds of Significance

As discussed in Subsection 4.11.1, the Project impacts to two (2) criteria pertaining to land use and planning will be analyzed. The Project would have a significant impact if it would:

26. Land Use.

a. 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?
b. Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential land use and planning changes in the environment are addressed in response to the above thresholds in the following analysis.

4.11.4 Potential Impacts

THRESHOLD 26.a: 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?

Less Than Significant Impact

The following General Plan Land Use designations apply to the Project:

- Residential Project Site Components:
  - Existing – Medium Density Residential (MDR).
  - Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

- Off-Site Project Components:
  - Existing – Estate Density Residential (EDR).
  - Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

The following are the current adjacent and surrounding General Plan Land Use Designation(s):

- Residential Project Site Components (all Community Development):
  - North: Medium Density Residential (MDR).
  - South: Medium Density Residential (MDR).
  - East: Medium Density Residential (MDR).
  - West: Estate Density Residential (EDR).

- Off-Site Project Components (Community Development and Rural Community):
  - North: Estate Density Residential (CD: EDR).
  - South: Estate Density Residential (RC: EDR).
  - East: Medium Density Residential (CD MDR).
  - West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential. The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **Standard Condition SC-AES-1**, see Section 4.11.5)

The Project site is surrounded by properties with Medium Density Residential General Plan Land Use Designations to the north, east and south. These properties will ultimately be developed in a manner similar to the Project. The properties to the west are designated Estate Density Residential (EDR). All of these General Plan Land Use Designations exist, and no changes are proposed.

The Off-Site Project components consist of roadways, sewer, and drainage facilities. The installation of the roadway and sewer facilities will be within exiting rights-of-way. The drainage facilities will be installed in a manner to serve the Project and area and will be serving to meet the current and future needs of development anticipated under the General Plan.

The following is the site's existing and proposed zoning (if applicable):

- Existing Zoning:
  - Residential Project Site Components: One-Family Dwellings (R-1).
  - Off-Site Project Components: Light Agriculture, 5-acre minimum lot size (A-1-5).
- Proposed Zoning:
  - Residential Project Site Components: Planned Residential (R-4).
  - Off-Site Project Components: None.

The current zoning classification on the Residential Project site is R-1 (One-Family Dwellings). CZ 1800007 proposes to change the zoning classification on the entire residential Project site of 158.18 gross acres from R-1 (to R-4 (Planned Residential). No other changes are proposed. As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines*.

The zoning for the Off-Site Project Components is Light Agriculture, 5-acre minimum lot size (A-1-5). No change to this zoning classification is proposed. Therefore, the Project will be consistent with the site's existing and proposed zoning.

The following is the adjacent and surrounding zoning:

- Residential Project Site Components:
  - North: Specific Plan (S-P) – (Specific Plan 293 - Winchester Hills).
  - South: Rural Residential (R-R).
  - East: Rural Residential (R-R) and One-Family Dwellings (R-1).
  - West: Rural Residential (R-R) and Light Agriculture, 5-acre minimum lot size (A-1-5).

- Off-Site Project Components:
  - North:
    - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Rural Residential (R-R).
  - South:
    - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Light Agriculture, 2½-acre minimum lot size (A-1-2½).
  - East:
    - County of Riverside: Rural Residential (R-R), One-Family Dwellings (R-1), and Light Agriculture, 2½-acre minimum lot size (A-1-2½).
    - City of Menifee: N/A.
  - West:
    - County of Riverside: Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Menifee East Specific Plan (SP).

As shown above, there are residential and agricultural zoning classifications on the adjacent and surrounding properties. The Residential Project Components will be consistent with the surrounding residential zoning. The proposed change from R-1 to R-4 allows for flexibility in the zoning standards. The Residential Project components are consistent with the General Plan Land Use Designation of CD:MDR. The Off-site Project components will not conflict with the existing surrounding zoning.

The Project is located within both the *HVWAP* and the *SCMVAP*. In addition, it is also located within the Highway 79 Policy Area and Estate Density Residential & Rural Residential Policy Area. Lastly, the Project will be subject to the Countywide Design Standards & Guidelines (Guidelines). There is no applicable specific plan.

The Project site is located within the Highway 79 Policy Area of the Harvest Valley/Winchester Area Plan. This Policy Area has been implemented to address transportation infrastructure timing as it relates to development projects. The Highway 79 Policy Area contains Policies relevant to the Project that duplicate *SCMVAP* 1.1, 2.3, and 5.1**,** above.

As discussed in Subchapter 4.15 (Transportation) of this DEIR:

"*The proposed Project is with the General Plan's Circulation Element, i.e. the proposed*

> *Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-1** and **Mitigation Measure MM-TR-2** to address the Project the Existing Plus Ambient plus Project plus Cumulative (EAPC) for the EPAC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) Project scenarios. With incorporation of **Mitigation Measure MM-TR-1** and **Mitigation Measure MM-TR-2**, Project cumulative impacts will be reduced to a less than significant level.*"

In addition, **Policy SCMVAP 6.1** states:

> "*In general, the program would establish guidelines to be incorporated into individual Traffic Impact Analyses that would monitor overall trip generation from residential development to ensure that overall within the Highway 79 Policy Area development projects produce traffic generation at a level that is 9% less than the trips projected from the General Plan traffic model residential land use designations. Individually, projects could exceed the General Plan traffic model trip generation level, provided it can be demonstrated that sufficient reductions have occurred on other projects in order to meet Level of Service standards.*"

At 574 single-family dwelling units, the Project is not consistent with the 9% reduction requirement. In order to be consistent with the 9% reduction requirement, a maximum of approximately 496 single-family dwelling units would be allowed.

An Amended Tentative Tract Map 37439 (with Remainder Parcel) was prepared subsequent to the Notice of Preparation, but prior to circulation of this DEIR. Reference **Figure 3-2, *Amended TTM 37439***, provided in Chapter 3 of this DEIR.

The purpose of this amended map is to be consistent with **Policy SCMVAP 6.1** (see Subchapter 4.11 Land Use and Planning of this DEIR) which is currently under consideration for change as part of the Harvest Valley/Winchester Community Plan update, yet it is still currently in effect. A total of 446 residential lots and one remainder parcel of 25.3 acres is proposed with the Amended Tentative Tract Map. 37439.

The subdivision would be divided into three (3) phases. Reference **Figure 3-3, *TTM 37439 Phasing***, provided in Chapter 3 of this DEIR. Phase 1 will build 129 lots, Phase 2 will build 130 lots, and Phase 3 will build 187 lots. The phasing maps show a total of 446 lots. The phasing map represents the logical development of the Project in terms of on- and off-site infrastructure improvements needed to support each phase of development. This will not alter the impact analysis or conclusions from the 574 units that were analyzed in the technical studies or this DEIR. The 574 units evaluated within the EIR encompasses the entire project that could be built under the allowable zoning for the project site, if not for Policy SCMVAP 6.1. It was this higher density that was evaluated throughout the EIR. However, due to Policy SCMVAP 6.1 as it relates to traffic within the Highway 79 Policy Area, the submitted Amended Tentative Tract Map No. 37439 only includes 446 lots and not 574 lots. Therefore, the impact analysis within the EIR is actually more conservative in nature due to the greater number of units.

The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned

Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **Standard Conditions SC-AES-1**, **SC-AES-4**, and **SC-AES-5**, provided in Subchapter 4.2 of this DEIR). The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential.

This section will also address the comments raised in *Comment Letter # 6*: Southern California Association of Governments (dated 11/7/18):

2016 RTP/SCS

The guiding policies for the 2016 RTP/SCS are intended to help focus future investments on the best-performing projects and strategies to preserve, maintain and optimize the performance of the existing transportation system. Two additional guiding policies have been added since 2012. The first addition (Guiding Policy 6) addresses emerging technologies and the potential for such technologies to lower the number of collisions, improve traveler information, reduce the demand for driving alone and lessen congestion related to road incidents and other non-recurring circumstances (a car collision, for example). The second addition (Guiding Policy 7) recognizes the potential for transportation investments to improve both the efficiency of the transportation network and the environment.

The following is a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency, or non-applicability of the policy and supportive analysis. The RTP/SCS Strategies – if applicable, refer to these strategies as guidance for considering the proposed Project within the context of regional goals and policies.

Table 4.11-1, *RTP/SCS Goals*, lists the 9 Goals contained in the 2016 RTP/SCS and the Project's relationship to these Goals.

Table 4.11-1
RTP/SCS Goals

Goal	Project
1. Align the plan investments and policies with improving regional economic development and competitiveness.	**Consistent.** The Project contains residential uses that will contribute to economic development and competitiveness.
2. Maximize mobility and accessibility for all people and goods in the region.	**Consistent.** The Project offers opportunities for vehicular and non-vehicular modes of transportation; thereby, providing mobility and accessibility for people and goods. Please reference the detailed discussion in Subchapter 4.15, Transportation in this DEIR.
3. Ensure travel safety and reliability for all people and goods in the region.	**Consistent.** The Project offers opportunities for vehicular and non-vehicular modes (pedestrian and bicycle) of transportation; thereby, providing travel safety and reliability for all people and goods. Please reference the detailed discussion in Subchapter 44.15, Transportation in this DEIR.
4. Preserve and ensure a sustainable regional transportation system.	**Consistent.** The Project will not provide a hindrance to the preservation and ensurance of a sustainable regional transportation system. As discussed in Subchapter4.15, Transportation in this DEIR, implementation of the Project will result in less than significant impacts, as the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF and DIF.
5. Maximize the productivity of our transportation system.	**Consistent.** The Project provides additional local and subregional roadways, and will not provide a hindrance to the productivity of the transportation system. As discussed in Subchapter 4.15, Transportation in this DEIR, implementation of the Project will result in less than significant impacts, as the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF and DIF.
6. Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	**Consistent.** The Project offers opportunities for vehicular and non-vehicular modes (pedestrian and bicycle) of transportation; thereby, protecting the environment and health of residents by improving air quality. Please reference the detailed discussion in Subchapter 4.15, Transportation in this DEIR.
7. Actively encourage and create incentives for energy efficiency, where possible.	**Consistent.** The Project will comply with Title 24 requirements; which includes energy efficiency, where possible.
8. Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent.** The Project offers opportunities for vehicular and non-vehicular modes (pedestrian and bicycle) of transportation. Please reference the detailed discussion in Subchapter4.15, Transportation in this DEIR.
9. Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Not applicable (N/A).** This is not a function of the Project.

Source: 2016 *RTP/SCS*

As demonstrated in **Table 4.11-1**, the Project is consistent with these Goals. Any impacts from the Project are considered less than significant.

Table 4.11-2, *RTP/SCS Policies,* below lists the 8 Goals contained in the 2016 RTP/SCS and the Project's relationship to these Goals.

Table 4.11-2
RTP/SCS Policies

Goal	Project
1. Transportation investments shall be based on SCAG's adopted regional Performance Indicators.	**N/A.** This is not a function of the Project.
2. Ensuring safety, adequate maintenance, and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region.	**N/A.** This is not a function of the Project.
3. RTP/SCS land use and growth strategies in the RTP/SCS will respect local input and advance smart growth initiatives.	**N/A.** This is not a function of the Project.
4. Transportation demand management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1.	**N/A.** This is not a function of the Project.
5. HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1.	**N/A.** This is not a function of the Project.
6. The RTP/SCS will support investments and strategies to reduce non-recurrent congestion and demand for single occupancy vehicle use, by leveraging advanced technologies.	**N/A.** This is not a function of the Project.
7. The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system and sustainable outcomes in the long run.	**N/A.** This is not a function of the Project.
8. Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan.	**N/A.** This is not a function of the Project.

Source: *2016 RTP/SCS*

As demonstrated in **Table 4.11-2**, the Policies are not applicable to the Project. These Policies are geared more to the regional and sub-regional level. No impact will occur.

According to Section 3.11, Land Use and Planning of the Final PEIR for the 2016 RTP/SCS, one project-level performance standards-based mitigation measure was identified (below) in response to the question raised in this Threshold. SCAG indicated in their comment letter on the NOP, that mitigation measures "may be considered by the City, as applicable and feasible."

> **"MM-LU-1(b):** Consistent with the provisions of Section 15091 of the State CEQA Guidelines, SCAG has identified mitigation measures capable of avoiding or

> reducing the significant effects regarding the potential to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project that are within the jurisdiction and responsibility of local jurisdictions and Lead Agencies. Where the Lead Agency has identified that a project has the potential for significant effects, the Lead Agency can and should consider mitigation measures to ensure compliance with the goals and policies established within the applicable adopted county and city general plans within the SCAG region to avoid conflicts with zoning and ordinance codes, general plans, land use plan, policy, or regulation of an agency with jurisdiction over the project, as applicable and feasible. Such measures may include the following, or other comparable measures identified by the Lead Agency:
>
> • Where an inconsistency with the adopted general plan is identified at the proposed project location, determine if the environmental, social, economic, and engineering benefits of the project warrant a variance from adopted zoning or an amendment to the general plan."

Given that the proposed Project was anticipated under the existing General Plan land use designation, the proposed land uses would intensify the development and associated population projections planned for under the General Plan. Therefore, the Project would not conflict with and exceed the assumptions used to develop the RTP/SCS. Project consistency with the RTP/SCS (see **Table 4.11-1, *RTP/SCS Goals***) demonstrates that Project impacts will be considered less than significant impact.

Based on this information the Project will not 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. Any impacts are considered less than significant.

THRESHOLD 26.b: Would the Project disrupt or divide the physical arrangement of an established community (including a low-income or minority community?

Less Than Significant Impact

Please reference the discussion in Threshold 26.a. The Project will represent a change to a rural area that will result in a suburban form of development. This form of development is anticipated in the General Plan for the Project site and the environs surrounding the Project site. Roadways (Leon Road, Briggs Road, Holland Road and Eucalyptus Road) will be improved to General Plan standards and will contribute to the planned development of the Project area. The same conclusions can be drawn from the water, sewer, and drainage improvements. None of these improvements would be considered any type of barrier or disruption to the area.

Therefore, the Project would not disrupt or divide the physical arrangement of an established community (agricultural, vacant, or large lot single-family residential); however, this impact will be less than significant.

4.11.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance
No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Conditions SC-AES-1, SC-AES-4, and **SC-AES-5** are applicable to all Projects within the County and are not considered unique mitigation under CEQA.

SC-AES-1 The Project shall be consistent with the Countywide Design Standards & Guidelines which are in effect at the time of map design and at building permit issuance.

SC-AES-4 The Project shall be consistent with the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* which are in effect at the time of map design and at building permit issuance.

SC-AES-5 The Project shall comply with the *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., August 2018.

Mitigation Measure(s)

No mitigation measures are required for land use and planning resources.

4.11.6 Cumulative Impacts

Implementation of the proposed Project, when considered in conjunction with other existing and planned developments in the Project area, would result in developing vacant land into 574 single-family residences, parks, roadways, and sewer and drainage improvements. The cumulative study area analyzed for potential land use impacts is the County of Riverside, *Sun City/Menifee Valley Area Plan (SCMVAP)*, and *Harvest Valley/Winchester Area Plan (HVWAP)*.

The IS determined that the Project would not affect land use within a city sphere of influence and/or within adjacent city or county boundaries. No impacts will occur.

According to the analysis above, the Project will be consistent with the site's existing and proposed zoning, will be compatible with existing surrounding zoning, and will be compatible with existing and planned surrounding land uses.

Lastly, the Project will represent a change to a rural area that will result in a suburban form of development. This form of development is anticipated in the General Plan for the Project site and the environs surrounding the Project site. The Project would disrupt or divide the physical

arrangement of an established community (agricultural, vacant, or large lot single-family residential); however, this impact will be less than significant.

Therefore, based on the analysis contained above in this Subchapter, the Project will not result in significant cumulative impacts.

4.11.7 Unavoidable Significant Adverse Impacts

The proposed Project would not represent a change to the County's General Plan Land Use Plan; however, it will represent a change to the County's Zoning Map. Based on the data and analysis presented in this Subchapter, implementation of the proposed Project will not cause significant unavoidable adverse impacts relative to the land use and planning.

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4.12 NOISE

4.12.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of noise from implementation of the Project. The Noise Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

29. Airport Noise.
- a. 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 expose people residing or working in the Project area to excessive noise levels?
- b. For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

30. Railroad Noise. Would the Project result in railroad noise?

31. Highway Noise. Would the Project result in highway noise?

32. Other Noise. Would the Project result in other noise?

33. Noise Effects on or by the Project.
- a. A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?
- b. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?
- c. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- d. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 29.a, 29.b, 30, and 32, related to noise (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified "no impact" to those issue areas, as a result of implementation of the Project.

Based on the analysis in the IS, the remaining five (5) issue areas, 31, and 33.a through 33.d, related to noise in the questions asked above, **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. Issue area 31 was deleted. The text contained in issue areas 33.a and 33.c was combined and modified, the

text in issue area 33.d was revised. Issue area 33.b was deleted. These revisions will be reflected in the DEIR.
Therefore, the following two (2) issue areas will be analyzed in the DEIR:

33. Noise Effects by the Project.
- 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, noise ordinance, or applicable standards of other agencies?
- b. Generation of excessive ground-borne vibration or ground-borne noise levels?

Standard Condition SC-NOI-1 (**Ordinance No. 847**) shall be carried over to this DEIR. No mitigation measures were presented in the IS that shall be carried over to this DEIR.

In addition to the IS the following resources were utilized in the preparation of this Subchapter:

- *Canterwood Tentative Tract Map No. 37439) Noise Analysis County of Riverside,* prepared by Urban Crossroads, August 9, 2018 (*Noise Impact Analysis*, **Appendix J**)

All the Tables and Figures in this Section are from the *Noise Impact Analysis*, unless stated otherwise.

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments concerning Noise were received in response to the NOP/IS for the proposed Project. Additionally, no comments were received in response to the NOP/IS at the scoping meeting held for the proposed Project.

Therefore, the above issues identified in 33.a and 33.b, above, are the focus of the following evaluation of noise.

The following discussions are abstracted from the above referenced technical studies, which are provided in Volume 2 of the DEIR, the Technical Appendices.

4.12.2 Environmental Setting

4.12.2.1 Existing Conditions

4.12.2.1.a Noise

Noise has the following characteristics, as discussed in the *Noise Impact Analysis*:

Fundamentals

Noise is generally 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. **Table 4.12-1, *Typical Noise Levels***, presents a summary of the typical noise levels, and their subjective loudness and effects.

Table 4.12-1
Typical Noise Levels

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Range of Noise

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as roughly twice as loud. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noise equate to 110 dBA at approximately 100 feet, which can cause serious discomfort. Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent sound level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in dBA. The 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. 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-hournois level is utilized. The LDN and CNEL are weighted averages of the intensity of a sound, with correction for time of day, and averaged over 24 hours. The LDN time of day corrections include the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. The CNEL time of day corrections require 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 represent the total sound exposure. The County of Riverside relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources, and therefore, this analysis uses the CNEL noise level to apply the more conservative evening hour corrections to the 24-hour noise levels.

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 following factors:

- *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.

- *Ground Absorption*

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 ft. 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.

- *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 increase noise levels.

- *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 resident. 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.

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, receptor, or all three. 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.

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.

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 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.

Community Response to Noise

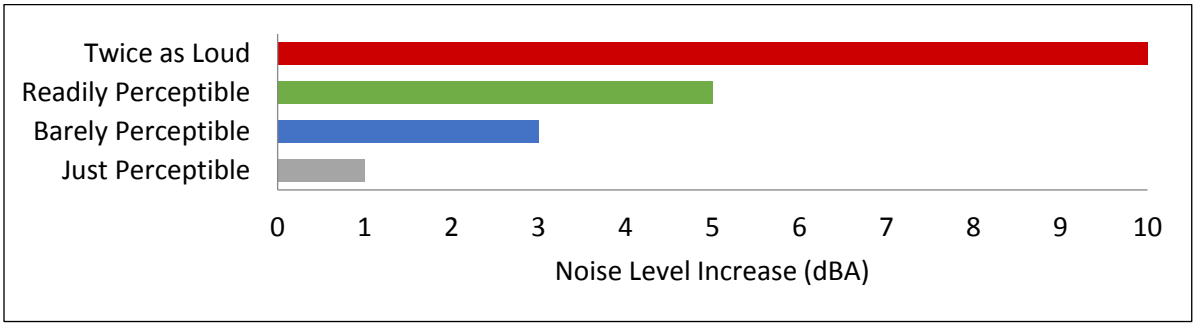
Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon each individual's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- 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
- 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. 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.

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels as shown on **Table 4.12-2, *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 are considered barely perceptible, and changes of 5 dBA are considered readily perceptible.

Table 4.12-2
Noise Level Increase Perception



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 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.

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. The *Noise Impact Analysis* did 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 annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment.

Vibration

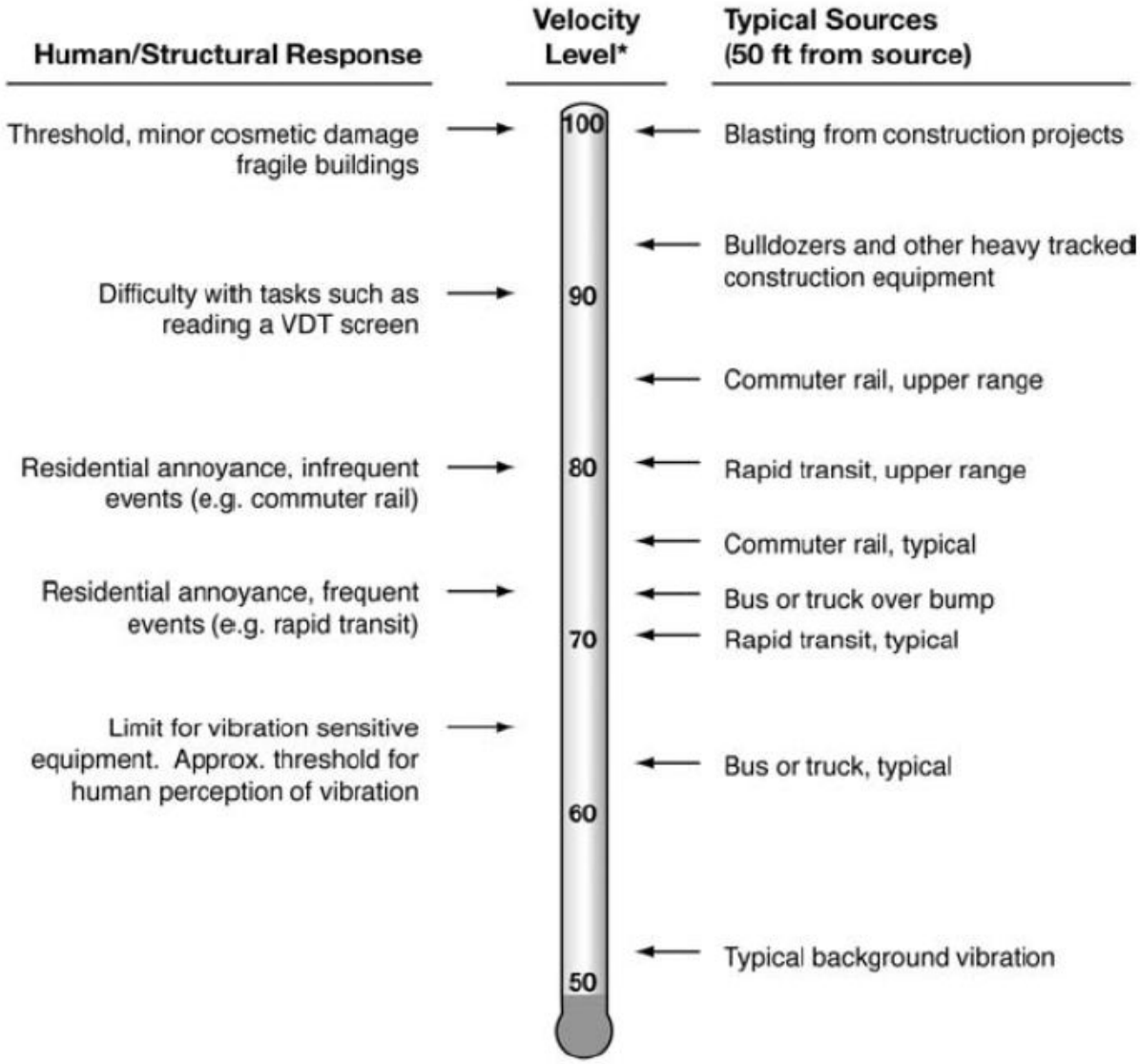
According to the Federal Transit Administration's (FTA) *Transit Noise Impact and Vibration Assessment*, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surface is called structure-borne noise. Sources of ground-borne vibrations include 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.

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 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. VdB 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.

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. **Figure 4.12-1, *Typical Levels of Ground-Borne Vibration***, illustrates common vibration sources and the human and structural response to ground-borne vibration.

FIGURE 4.12-1
TYPICAL LEVELS OF GROUND-BORNE VIBRATION



Source: Noise Study (**Appendix J**)

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4.12.2.1.b Land Use and Adjacent Land Uses

The following are the current adjacent and surrounding Land Use Designation(s):

- Residential Project Site Components (all Community Development):
  - North: Medium Density Residential (MDR).
  - South: Medium Density Residential (MDR).
  - East: Medium Density Residential (MDR).
  - West: Estate Density Residential (EDR).

- Off-Site Project Components (Community Development and Rural Community):
  - North: Estate Density Residential (CD: EDR).
  - South: Estate Density Residential (RC: EDR).
  - East: Medium Density Residential (CD MDR).
  - West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

The following are the current adjacent and surrounding land uses:

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads and single family residential land uses.

4.12.2.1.c Existing Noise Level Measurements

To assess the existing noise level environment, six 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. **Figure 4.12-2, *Noise Measurement Locations***, provides the boundaries of the Project study area and the noise level measurement locations. Noise level measurements were collected on February 21, 2018.

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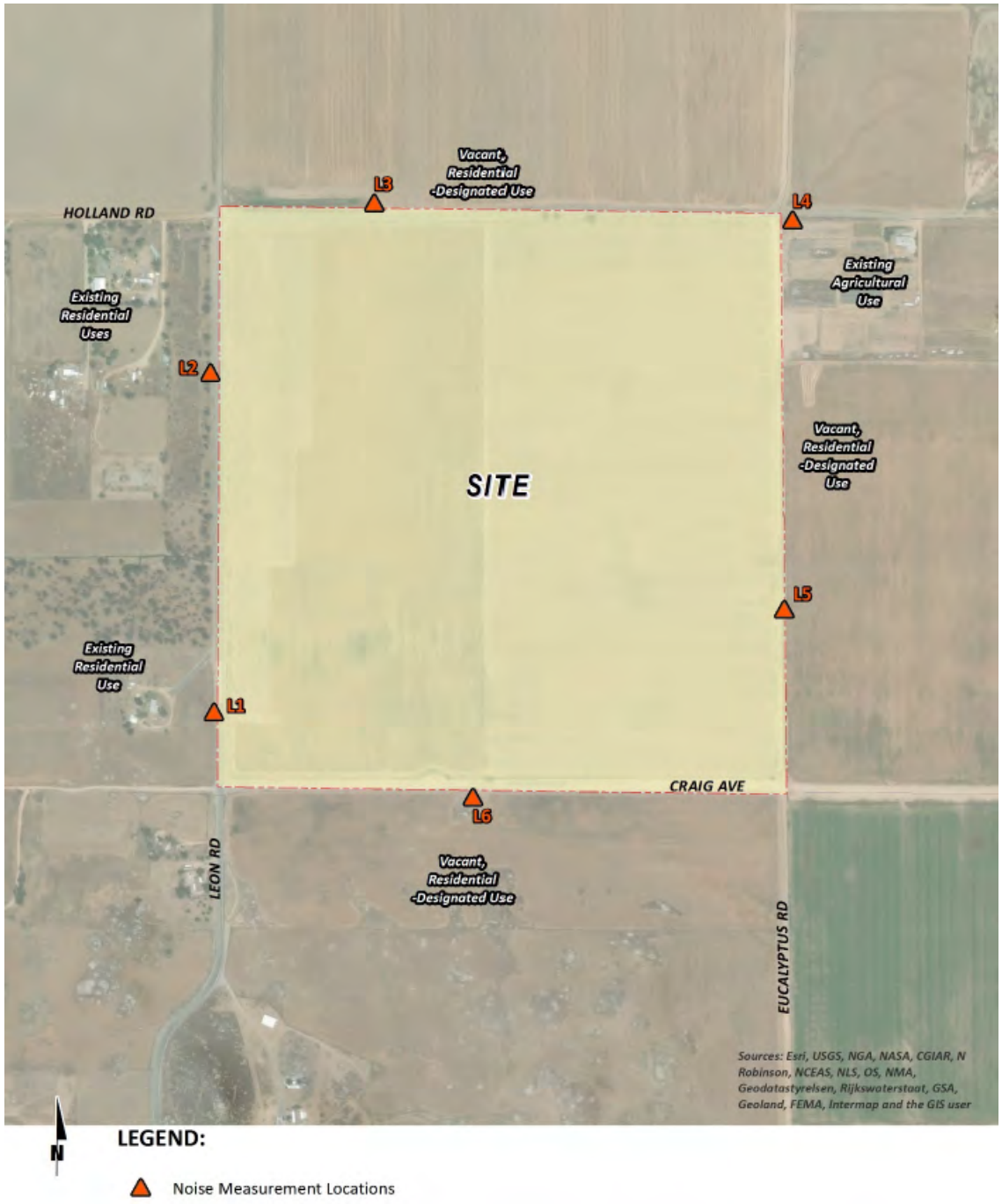
FIGURE 4.12-2
NOISE MEASUREMENT LOCATIONS



Source: Noise Study (**Appendix J**)

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Measurement Procedure and Criteria

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 readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the 2013 American National Standards Institute specifications for sound level meters.

Noise Measurement Locations

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. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent any part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that*, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. Further, FTA guidance states, that *it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*.

Based on recommendations of Caltrans and the FTA, 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. 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 potential noise impacts due to the Project's contribution to the ambient noise levels.

Noise Measurement Results

The noise measurements presented below focus on average or L_{eq}. The L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. **Table 4.12-3, *Off-Site Roadway Parameters***, identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location:

Table 4.12-3
Off-Site Roadway Parameter

No.	Roadway	Segment	Adjacent Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	59'	50
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59'	50
3	Antelope Rd.	s/o Scott Rd.	Commercial	59'	50
4	Menifee Rd.	n/o Holland Rd.	Residential	64'	45
5	Menifee Rd.	s/o Holland Rd.	Residential	64'	45
6	Leon Rd.	s/o Craig Av.	Residential	59'	35
7	Leon Rd.	s/o Garbani Rd.	Residential	59'	55
8	Leon Rd.	s/o Scott Rd.	Residential	59'	55
9	Holland Rd.	w/o Menifee Rd.	Residential	59'	45
10	Holland Rd.	e/o Menifee Rd.	Residential	59'	45
11	Holland Rd.	w/o Briggs Rd.	Residential	59'	45
12	Holland Rd.	w/o Leon Rd.	Residential	59'	45
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	76'	50
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	76'	50
15	Scott Rd.	w/o Menifee Rd.	Residential	76'	55
16	Scott Rd.	w/o Briggs Rd.	Residential	76'	55
17	Scott Rd.	w/o Leon Rd.	Residential	76'	55
18	Scott Rd.	e/o Leon Rd.	Residential	76'	55

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the County of Riverside and City of Menifee General Plan Circulation Elements.
[3] Source: Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, June 5, 2018.

- **Location L1** represents the noise levels west of the Project site on Leon Road near an existing residential home. The noise level measurements collected show an overall 24-hour

exterior noise level of 64.4 dBA CNEL. The hourly noise levels measured at location L1 ranged from 56.1 to 64.3 dBA L_{eq} during the daytime hours and from 48.8 to 62.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 61.2 dBA L_{eq} with an average nighttime noise level of 56.1 dBA L_{eq}.

- **Location L2** represents the noise levels west of the Project site on Leon Road near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 59.8 dBA CNEL. The hourly noise levels measured at location L2 ranged from 47.9 to 63.4 dBA L_{eq} during the daytime hours and from 40.5 to 54.5 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 57.2 dBA L_{eq} with an average nighttime noise level of 49.1 dBA L_{eq}.
- **Location L3** represents the noise levels north of the Project site on Holland Road near existing agricultural uses. The 24-hour CNEL indicates that the overall exterior noise level is 56.8 dBA CNEL. At location L3 the background ambient noise levels ranged from 42.4 to 56.7 dBA L_{eq} during the daytime hours to levels of 43.3 to 53.8 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 51.0 dBA L_{eq} with an average nighttime noise level of 49.7 dBA L_{eq}.
- **Location L4** represents the noise levels near the northeast Project site boundary adjacent to an existing agricultural use and residential home on Holland Road. The noise level measurements collected show an overall 24-hour exterior noise level of 54.0 dBA CNEL. The hourly noise levels measured at location L4 ranged from 39.5 to 59.1 dBA L_{eq} during the daytime hours and from 38.3 to 53.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 52.7 dBA L_{eq} with an average nighttime noise level of 45.3 dBA L_{eq}.
- **Location L5** represents the noise levels on Eucalyptus Road adjacent to vacant land east of the Project site. The 24-hour CNEL indicates that the overall exterior noise level is 55.9 dBA CNEL. At location L5 the background ambient noise levels ranged from 43.7 to 60.2 dBA L_{eq} during the daytime hours to levels of 38.4 to 55.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 54.4 dBA L_{eq} with an average nighttime noise level of 47.3 dBA L_{eq}.
- **Location L6** represents the noise levels south of the Project site adjacent to vacant land on Craig Avenue. The noise level measurements collected show an overall 24-hour exterior noise level of 50.1 dBA CNEL. The hourly noise levels measured at location L6 ranged from 39.8 to 54.3 dBA L_{eq} during the daytime hours and from 37.2 to 46.0 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 48.5 dBA L_{eq} with an average nighttime noise level of 41.6 dBA L_{eq}.

Table 4.12-4, *24-Hour Ambient Noise Level Measurements*, provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. The 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 arterial roadway network. 24-hour existing ambient noise level measurements are shown on **Table 4.12-4**. See also **Figure 4.12-2, *Noise Measurement Locations***.

Table 4.12-4
24-Hour Ambient Noise Level Measurements

Location[1]	Distance to Project Boundary (Feet)	Description	Energy Average Hourly Noise Level (dBA Leq)[2]		CNEL
			Daytime	Nighttime	
L1	20'	Located west of the Project site on Leon Road near an existing residential home.	61.2	56.1	64.4
L2	40'	Located west of the Project site on Leon Road near existing residential homes.	57.2	49.1	59.8
L3	25'	Located north of the Project site on Holland Road near existing agricultural uses.	51.0	49.7	56.8
L4	53'	Located near the northeast Project site boundary adjacent to an existing agricultural use and residential home on Holland Road.	52.7	45.3	54.0
L5	0'	Located on Eucalyptus Road adjacent to vacant land east of the Project site.	54.4	47.3	55.9
L6	35'	Located south of the Project site adjacent to vacant land on Craig Avenue.	48.5	41.6	50.1

[1] See **Figure 4.12-2, *Noise Measurement Locations*** 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 *NIA*.

4.12.2.2 Regulatory Setting

4.12.2.2.a Applicable Noise Standards – Federal

United States Environmental Protection Agency

In 1972, Congress enacted the Noise Control Act. This act authorized the United States Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) categories, as shown in **Table 4.12-5**, ***Summary of EPA Recommended Noise Levels to Protect Public Welfare***. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The EPA activity and interference

guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Table 4.12-5
Summary of EPA Recommended Noise Levels to Protect Public Welfare

Effect	Level	Area
Hearing loss	Leq(24) < 70 dB	All areas
Outdoor activity interference and annoyance	Ldn < 55 dB	Outdoors in residential areas, farms, and other outdoor areas where people spend widely varying amounts of time, and other places in which quiet is a basis for use.
	Leq(24) < 55 dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	Leq < 45 dB	Indoor residential areas.
	Leq(24) < 45 dB	Other indoor areas with human activities such as schools, etc.

Note: (24) = Leq duration of 24 hours Source: EPA, 1974

Federal Transit Administration

The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in the FTA 2018 Manual. The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in **Table 4.12-6**, ***Federal Transit Administration Construction Vibration Impact Criteria***.

Table 4.12-6
Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced—Concrete, Steel or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non-Engineered Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90

Note: VdB = velocity in decibels Source: FTA, 2018.

4.12.2.2.b Applicable Noise Standards - State

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, Federal agencies, the State of California, various county governments, and most

municipalities have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains fairly constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

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. In addition, the CEQA requires that all known environmental effects of a project be analyzed, including potential environmental noise impacts.

State of California Building 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 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.

4.12.2.2.c Applicable Noise Standards - Local

County of Riverside General Plan - Noise Element

The objective of the Noise Element is to minimize the exposure of new residential development, schools, hospitals and similar noise-sensitive uses to excessive or unhealthy noise levels to the greatest extent possible. The Noise Element specifies the maximum allowable 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 polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To protect residents from excessive noise, the Noise Element contains the following policies related to the Project:

- **Policy N 1.1** Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.
- **Policy N 1.3** Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:
  - Schools
  - Hospitals
  - Rest Homes
  - Long Term Care Facilities
  - Mental Care Facilities
  - Residential Uses
  - Libraries
  - Passive Recreation Uses
  - Places of Worship
- **Policy N 1.5** Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.
- **Policy N 1.7** Require proposed land uses, affected by unacceptable high noise levels, to have an acoustical specialist prepare a study of the noise problems and recommend structural and site design features that will adequately mitigate the noise problem.
- **Policy N 4.1** Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:
  - 45 dBA 10-minute Leq between 10:00 p.m. and 7:00 a.m.;
  - 65 dBA 10-minute Leq between 7:00 a.m. and 10:00 p.m.
- **Policy N 13.1** Minimize the impacts of construction noise on adjacent uses within acceptable standards.
- **Policy N 13.2** Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.
- **Policy N 13.3** Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the appropriate local agency for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:
  - Temporary noise attenuation fences;
  - Preferential location and equipment; and
  - Use of current noise suppression technology and equipment.
- **N 14.1** Enforce the California Building Standards that sets standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.
- **Policy N 16.3** Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches/second over a range of 1 to 100 Hz.

To ensure noise-sensitive land uses are protected from high levels of noise, the Noise Element identifies guidelines to evaluate proposed developments based on exterior and interior noise level limits for land uses and requires a noise analysis to determine needed mitigation measures if necessary. The Noise Element identifies residential use as a noise-sensitive land use (N 1.3) and discourages new development in areas with 65 CNEL or greater existing ambient noise levels. To prevent and mitigate noise impacts for its residents (N 1.5), County requires noise attenuation measures for sensitive land use exposed to noise levels higher than 65 CNEL. The intent of policy N 1.7 is to require a noise analysis for land uses impacted by unacceptably high noise levels and include mitigation measures in the design. Policy N 4.1 of the Noise Element sets a stationary-source exterior noise limit not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA L_{eq} for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{eq} during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. To prevent high levels of construction noise from impacting noise-sensitive land uses, policies N 13.1 through 13.3 identify construction noise mitigation requirements for new development located near existing noise-sensitive land uses. Policy 16.3 establishes the vibration perception threshold for rail-related vibration levels, used in this analysis as a threshold for determining potential vibration impacts due to Project construction.

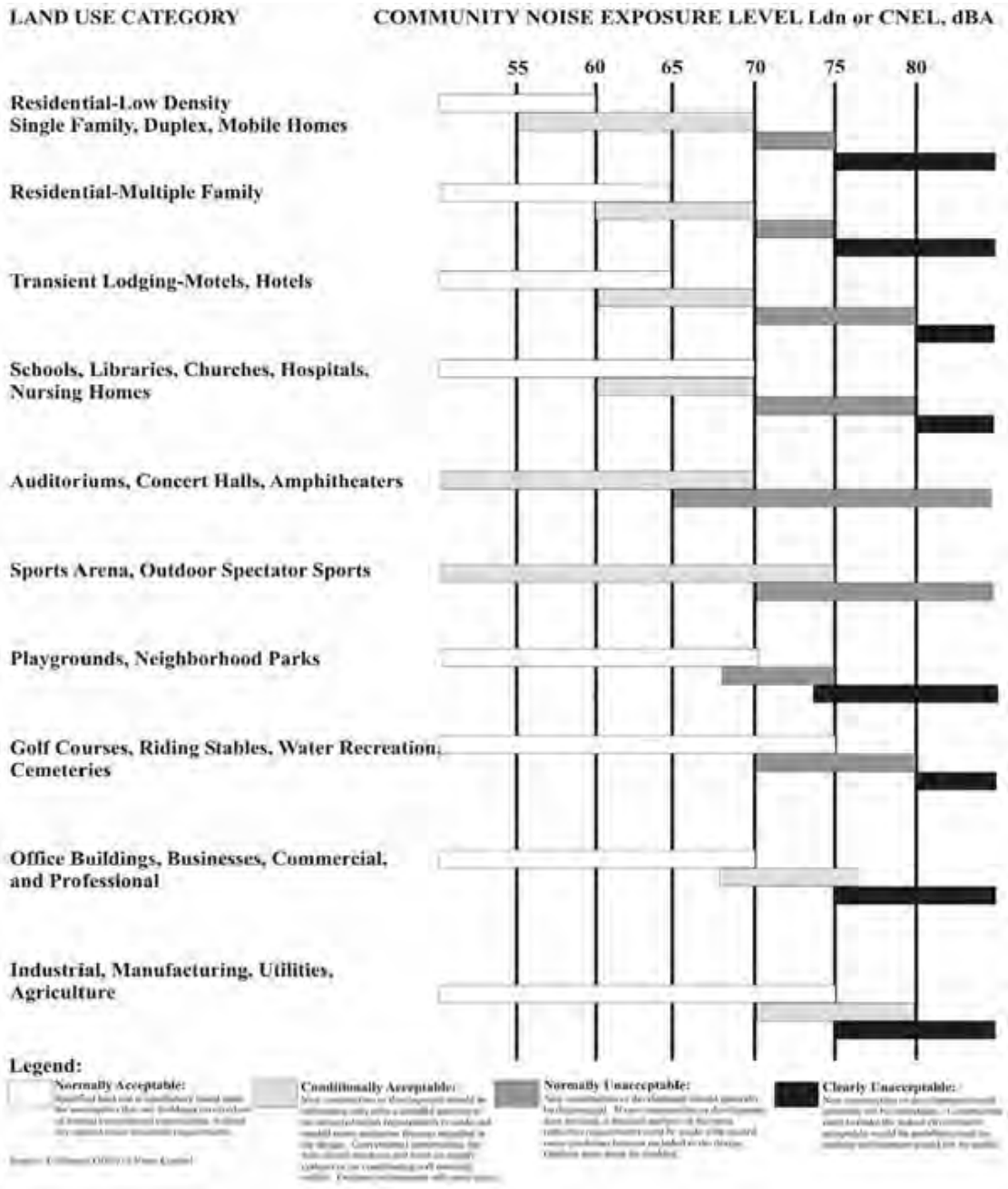
Noise-sensitive land uses identified in the Noise Element include residences, schools, and open space recreational areas where quiet environments are necessary for enjoyment, public health, and safety. General Plan policies related to protecting noise-sensitive land uses include discouraging the siting of noise-sensitive uses in areas in excess of 65 CNEL and requiring mitigation to reduce noise levels to below noise level limits. Policies that limit noise spillover from noise-generating uses include limiting the development of new noise-generating uses adjacent to noise-sensitive land uses and guiding noise-tolerant land uses into areas exposed to irrevocable noise sources such as transportation corridors and areas adjacent to airports.

Land Use Compatibility

The noise criteria in the Noise Element are guidelines the County uses to evaluate land use compatibility regarding transportation related noise. The compatibility criteria in **Figure 4.12-3, *The Land Use Compatibility for Community Noise Exposure***, provides the County with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

Figure 4.12-3 describes categories of compatibility - not specific noise standards. Noise-sensitive residential land use is considered normally acceptable with exterior noise levels of less than 60 dBA CNEL, and conditionally acceptable with exterior noise levels approaching 70 dBA CNEL. The criteria for new residential development, below, identifies exterior noise levels approaching 70 dBA CNEL as "conditionally acceptable". Specifically, "new construction or development should be undertaken only 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 will normally suffice."

FIGURE 4.12-3
THE LAND USE COMPATIBILITY FOR COMMUNITY NOISE EXPOSURE



Source: Noise Study (**Appendix J**)

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4.12.3 Thresholds of Significance

As discussed in Section 4.12.1, the Project impacts to two (2) criteria pertaining to noise resources will be analyzed. The Project would have a significant impact if it would result in:

33. Noise Effects by the Project.

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, noise ordinance, or applicable standards of other agencies?
b. Generation of excessive ground-borne vibration or ground-borne noise levels?

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. **Table 4.12-7, *Significance Criteria Summary***, summarizes the significance criteria.

Table 4.12-7
Significance Criteria Summary

Analysis	Receiving Land Use	Jurisdiction	Condition(s)	Significance Criteria	
				Daytime	Nighttime
Off-Site	Noise-Sensitive 1	All	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	Residential[3]	County of Riverside	Exterior Noise Level Criteria	65 dBA CNEL	
			Interior Noise Level Standard	45 dBA CNEL	
Construction	Noise-Sensitive	County of Riverside	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.[4]		
		All	Noise Level Threshold[5]	85 dBA L_{eq}	n/a
			Vibration Level Threshold[6]	0.01 in/sec RMS	n/a

[1] Source: FICON, 1992.
[2] Source: County of Riverside General Plan Noise Element, Table N-1.
[3] Source: County of Riverside General Plan Noise Element, Policies N 1.3 & N 14.1.
[4] Source: County of Riverside Municipal Code, Section 9.52.020 (I).
[5] Source: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure, June 1998.
[6] Source: County of Riverside General Plan Noise Element, Policy N 16.3.
"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.

4.12.3.1 Noise-Sensitive Receivers

CEQA requires noise level increases resulting from the Project to be evaluated at the location of the closest sensitive receivers. 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.

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 CNEL or hourly logarithmic Leq.

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, 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 is exceeded. Per 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 4.12-8, *Significance of Noise Impacts at Noise-Sensitive Receivers***, provides a summary of the potential noise impact significance criteria.

Table 4.12-8
Significance of Noise Impacts at Noise-Sensitive Receivers

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

The standards in **Figure 4.12-3**, ***The Land Use Compatibility for Community Noise Exposure,*** were used to establish the levels of significance for non-noise-sensitive land uses in the Project study area (such as industrial land uses). As previously shown, the *normally acceptable* exterior noise levels for non-noise-sensitive land uses is 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered conditionally acceptable per the Land Use Compatibility for Community Noise Exposure.

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. 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 is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but relies on the normally acceptable 70 dBA CNEL exterior noise level criteria from the Noise Element.

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development.

Off-Site Traffic Noise

When the noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.):

- Are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project related noise level increase; or
- Range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project noise level increase; or
- Already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL.

When the noise levels at existing and future non-noise-sensitive land uses (e.g., commercial, etc.):

- Are less than the *normally acceptable* 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 *normally acceptable* 70 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project noise level increase.

On-Site Traffic 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 all residential land uses.

Construction Noise and Vibration

If Project-related construction activities:

- Occur at any time other than the permitted hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May; or
- Generate noise levels which exceed the 85 dBA L_{eq} acceptable noise level threshold at the nearby sensitive receiver locations.

If short-term Project generated construction vibration levels exceed the County acceptable vibration standard of 0.01 in/sec RMS at sensitive receiver locations.

4.12.4 Potential Impacts

THRESHOLD 33.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, noise ordinance, or applicable standards of other agencies?

Significant and Unavoidable Impact

Overview

No permanent increases in ambient noise levels are anticipated during the construction phase of the Project. Construction by its nature is temporary.

Operational noise sources would create permanent increases in ambient noise levels and would be those typically associated with single-family residences (automobiles, landscaping equipment, occasional parties). The Project site is located in an area that is primarily agricultural in nature with a few large lot single-family residences and due to this setting, the Project will result in a permanent increase in ambient noise levels above levels existing without the Project.

In addition, noise may be associated with the lift station. This may be a result of temporary operational functions or testing of the back-up generator system.

The following is an outline of the methods and procedures used to model and analyze the future traffic noise environment.

FHWA Traffic Noise Prediction Model

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model. 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 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. This is methodology is consistent with the County requirements.

- Off-Site Traffic Noise Prediction Model Inputs

Table 4.12-9, *Off-Site Roadway Parameters*, below, presents the roadway parameters used to assess the Project's off-site transportation noise impacts. **Table 4.12-9** identifies the 18 Project area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per each applicable General Plan Circulation Element, and the vehicle speeds consistent with the Traffic Impact Analysis (*TIA*).

Table 4.12-9
Off-Site Roadway Parameters

ID	Roadway	Segment	Adjacent Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	59'	50
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59'	50
3	Antelope Rd.	s/o Scott Rd.	Commercial	59'	50
4	Menifee Rd.	n/o Holland Rd.	Residential	64'	45
5	Menifee Rd.	s/o Holland Rd.	Residential	64'	45
6	Leon Rd.	s/o Craig Av.	Residential	59'	35
7	Leon Rd.	s/o Garbani Rd.	Residential	59'	55
8	Leon Rd.	s/o Scott Rd.	Residential	59'	55
9	Holland Rd.	w/o Menifee Rd.	Residential	59'	45
10	Holland Rd.	e/o Menifee Rd.	Residential	59'	45
11	Holland Rd.	w/o Briggs Rd.	Residential	59'	45
12	Holland Rd.	w/o Leon Rd.	Residential	59'	45
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	76'	50
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	76'	50
15	Scott Rd.	w/o Menifee Rd.	Residential	76'	55
16	Scott Rd.	w/o Briggs Rd.	Residential	76'	55
17	Scott Rd.	w/o Leon Rd.	Residential	76'	55
18	Scott Rd.	e/o Leon Rd.	Residential	76'	55

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the County of Riverside and City of Menifee General Plan Circulation Elements.
[3] Source: Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, June 5, 2018.

The average daily traffic volumes used for the *TIA* are presented in **Table 4.12-10**, ***Average Daily Traffic Volumes***, on the 18 study area roadway segments, are presented below. For this analysis, soft site conditions are 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. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in the off-site traffic noise analysis for this Project.

Table 4.12-10
Average Daily Traffic Volumes

ID	Roadway	Segment	Average Daily Traffic (1,000's)[1]										
			Existing			EA 2021		EA 2025		EAC 2021		EAC 2025	
			Without Project	With Phase 1	With Buildout	Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Haun Rd.	n/o Scott Rd.	6.7	6.9	7.1	7.1	7.3	7.7	8.1	18.2	18.4	22.4	22.8
2	Zeiders Rd.	s/o Scott Rd.	1.2	1.3	1.3	1.3	1.4	1.4	1.5	5.6	5.7	7.2	7.3
3	Antelope Rd.	s/o Scott Rd.	10.6	10.8	11.0	11.3	11.5	12.1	12.5	15.9	16.1	18.3	18.7
4	Menifee Rd.	n/o Holland Rd.	6.0	6.2	6.4	6.4	6.6	6.9	7.3	13.7	13.9	16.7	17.1
5	Menifee Rd.	s/o Holland Rd.	5.3	5.4	5.5	5.7	5.8	6.1	6.3	14.1	14.2	17.4	17.6
6	Leon Rd.	s/o Craig Av.	0.4	2.9	5.0	0.4	2.9	0.4	5.0	1.8	4.3	3.0	7.6
7	Leon Rd.	s/o Garbani Rd.	0.7	3.2	5.3	0.8	3.3	0.8	5.4	2.6	5.1	3.2	7.8
8	Leon Rd.	s/o Scott Rd.	2.7	3.0	3.2	2.9	3.2	3.1	3.6	6.2	6.5	7.6	8.1
9	Holland Rd.	w/o Menifee Rd.	3.1	3.1	3.2	3.3	3.3	3.5	3.6	8.5	8.5	10.4	10.5
10	Holland Rd.	e/o Menifee Rd.	2.9	3.3	3.7	3.1	3.5	3.3	4.1	8.5	8.9	10.5	11.3
11	Holland Rd.	w/o Briggs Rd.	0.3	0.8	1.2	0.3	0.8	0.4	1.3	1.3	1.8	1.6	2.5
12	Holland Rd.	w/o Leon Rd.	n/a	0.7	1.1	0.2	0.7	0.2	1.1	0.6	1.1	0.8	1.7
13	Scott Rd.	w/o Haun Rd.	10.6	10.8	11.0	11.2	11.4	12.2	12.6	18.2	18.4	21.4	21.8
14	Scott Rd.	e/o Haun Rd.	15.5	16.0	16.5	16.5	17.0	17.8	18.8	30.0	30.5	35.8	36.8
15	Scott Rd.	w/o Menifee Rd.	14.0	16.1	17.7	14.8	16.9	16.1	19.8	26.5	28.6	31.7	35.4
16	Scott Rd.	w/o Briggs Rd.	11.7	13.8	15.5	12.4	14.5	13.4	17.2	23.2	25.3	27.8	31.6
17	Scott Rd.	w/o Leon Rd.	11.3	13.3	15.0	12.0	14.0	13.0	16.7	19.9	21.9	23.5	27.2
18	Scott Rd.	e/o Leon Rd.	5.1	5.4	5.5	5.4	5.7	5.9	6.3	10.7	11.0	13.0	13.4

[1] Source: Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, June 5, 2018.
"EA" = Existing plus Ambient Growth; "EAC" = Existing plus Ambient Growth plus Cumulative Developments; "n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

Table 4.12-11, *Time of Day Vehicle Splits*, presents the time of day vehicle splits and **Table 4.12-12, *Distribution of Traffic Flow by Vehicle Type (Vehicle Mix)***, presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution

percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

Table 4.12-11
Time of Day Vehicle Splits

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Riverside County (Expressway, Arterial, Major)				
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%
Riverside County (Secondary, Collector)				
Autos	75.55%	13.96%	10.49%	100.00%
Medium Trucks	48.91%	2.17%	48.91%	100.00%
Heavy Trucks	47.30%	5.41%	47.30%	100.00%

[1] Source: County of Riverside Office of Industrial Hygiene, 2017.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 4.12-12
Distribution of Traffic Flow by Vehicle Type (Vehicle Mix)

Classification	Total % Traffic Flow[1]			Total
	Autos	Medium Trucks	Heavy Trucks	
Major, Arterial, Urban Arterial	92.00%	3.00%	5.00%	100.00%
Secondary, Collector	97.42%	1.84%	0.74%	100.00%

[1] Source: County of Riverside Office of Industrial Hygiene.

Off-Site Transportation Noise

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *TIA* (**Appendix K** of this DEIR). Noise contour boundaries represent equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

Existing Conditions Without / With Phase 1: This scenario refers to the existing present-day noise conditions without and with Phase 1 of the proposed Project.

Existing Conditions Without / With Project Buildout: This scenario refers to the existing present-day noise conditions without and with Buildout of the proposed Project.

Existing plus Ambient Growth (EA) Year 2021 Without / With Phase 1: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Phase 1 of the proposed Project.

EA Year 2025 Without / With Project Buildout: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Buildout the proposed Project.

EA plus Cumulative Developments (EAC) Year 2021 Without / With Phase 1: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Phase 1 of the proposed Project. This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.

EAC Year 2025 Without / With Project Buildout: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Buildout the proposed Project. This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.

- *Traffic Noise Contours*

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. **Table 4.12-13, *Existing Without Project Conditions Noise Contours*** and **Table 4.12-14, *EAC 2025 With Project Buildout Conditions Noise Contours***, present a summary of the exterior traffic noise levels, without barrier attenuation, for the 18 study area roadway segments analyzed from both the without Project to the With Project conditions under Existing, EA 2021, EA 2025, EAC 2021, and EAC 2025 conditions.

Table 4.12-13
Existing Without Project Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.3	RW	84	180
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	59.8	RW	RW	RW
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.3	RW	114	245
4	Menifee Rd.	n/o Holland Rd.	Residential	65.3	RW	67	144
5	Menifee Rd.	s/o Holland Rd.	Residential	64.7	RW	RW	132
6	Leon Rd.	s/o Craig Av.	Residential	56.8	RW	RW	RW
7	Leon Rd.	s/o Garbani Rd.	Residential	62.7	RW	RW	90
8	Leon Rd.	s/o Scott Rd.	Residential	68.6	RW	102	220
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	RW	RW	92
10	Holland Rd.	e/o Menifee Rd.	Residential	62.6	RW	RW	88
11	Holland Rd.	w/o Briggs Rd.	Residential	52.7	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	n/a	n/a	n/a	n/a
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.0	RW	121	261
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	69.7	RW	156	336
15	Scott Rd.	w/o Menifee Rd.	Residential	70.2	79	169	364
16	Scott Rd.	w/o Briggs Rd.	Residential	69.4	RW	150	323
17	Scott Rd.	w/o Leon Rd.	Residential	69.3	RW	147	316
18	Scott Rd.	e/o Leon Rd.	Residential	70.1	77	166	358

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

Table 4.12-14
EAC 2025 With Project Buildout Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.9	RW	92	198
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	60.5	RW	RW	64
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.8	RW	124	267
4	Menifee Rd.	n/o Holland Rd.	Residential	65.9	RW	73	158
5	Menifee Rd.	s/o Holland Rd.	Residential	65.3	RW	67	145
6	Leon Rd.	s/o Craig Av.	Residential	56.8	RW	RW	RW
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	RW	RW	98
8	Leon Rd.	s/o Scott Rd.	Residential	69.2	RW	112	241
9	Holland Rd.	w/o Menifee Rd.	Residential	63.4	RW	RW	99
10	Holland Rd.	e/o Menifee Rd.	Residential	63.1	RW	RW	96
11	Holland Rd.	w/o Briggs Rd.	Residential	54.3	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	56.3	RW	RW	RW
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.6	RW	133	287
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	70.3	79	171	369
15	Scott Rd.	w/o Menifee Rd.	Residential	70.8	86	186	400
16	Scott Rd.	w/o Briggs Rd.	Residential	70.0	76	164	354
17	Scott Rd.	w/o Leon Rd.	Residential	69.9	RW	161	347
18	Scott Rd.	e/o Leon Rd.	Residential	70.7	85	183	395

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Existing Condition Project Traffic Noise Level Contributions

Table 4.12-13 shows the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 52.7 to 70.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Existing With Phase 1 Project Traffic Noise Level Contributions

Table 4.12-15, ***Existing With Phase 1 Conditions Noise Contours***, shows the Existing with Phase 1 conditions will range from 57.0 to 70.8 dBA CNEL. As shown on **Table 4.12-16**, ***Existing With Phase 1 Off-Site Traffic Noise Impacts***, Project traffic will generate noise level increases ranging from 0.0 to 8.6 dBA CNEL on the Project area roadway segments. The Project-related noise level increases are considered potentially significant under Existing with Phase 1 conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6); and
- Leon Road south of Garbani Road (Segment #7).

Due to low existing traffic volumes on these roadway segments, the Phase 1 Project traffic volume contributions would result in potentially significant off-site traffic noise level increases under Existing with Phase 1 conditions, even though this scenario will not actually occur until Phase 1 is built and occupied under Year 2021 conditions. All other roadway segments would experience less than significant off-site traffic noise level impacts.

Table 4.12-15
Existing With Phase 1 Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.4	RW	85	184
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	60.2	RW	RW	60
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.4	RW	115	248
4	Menifee Rd.	n/o Holland Rd.	Residential	65.4	RW	68	147
5	Menifee Rd.	s/o Holland Rd.	Residential	64.8	RW	RW	134
6	Leon Rd.	s/o Craig Av.	Residential	65.4	RW	63	135
7	Leon Rd.	s/o Garbani Rd.	Residential	69.3	RW	114	247
8	Leon Rd.	s/o Scott Rd.	Residential	69.0	RW	110	236
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	RW	RW	92
10	Holland Rd.	e/o Menifee Rd.	Residential	63.1	RW	RW	96
11	Holland Rd.	w/o Briggs Rd.	Residential	57.0	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	61.1	RW	RW	70
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.1	RW	123	264
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	69.8	RW	159	343
15	Scott Rd.	w/o Menifee Rd.	Residential	70.8	86	186	400
16	Scott Rd.	w/o Briggs Rd.	Residential	70.1	78	168	361
17	Scott Rd.	w/o Leon Rd.	Residential	70.0	76	163	352
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	80	173	372

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-16
Existing With Phase 1 Off-Site Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.3	67.4	0.1	No	No
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	59.8	60.2	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.3	69.4	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.3	65.4	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	64.7	64.8	0.1	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	65.4	8.6	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	62.7	69.3	6.6	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	68.6	69.0	0.5	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	62.9	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	62.6	63.1	0.6	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	52.7	57.0	4.3	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	n/a	n/a	n/a	n/a	n/a
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.0	68.1	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	69.7	69.8	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.2	70.8	0.6	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	69.4	70.1	0.7	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.3	70.0	0.7	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.1	70.4	0.2	Yes	No

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
[3] Significance Criteria (See Section 4.12.3).
"n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

Existing With Project Buildout Traffic Noise Level Contributions

Table 4.12-17, ***Existing with Project Buildout Conditions Noise Contours***, shows that Existing with Project Buildout conditions will range from 58.8 to 71.5 dBA CNEL. As shown on **Table 4.12-18**, ***Existing with Project Buildout Conditions Noise Contours***, existing with Project buildout off-site traffic noise impacts will range from 0.0 to 11.0 dBA CNEL on the study area roadway segments. Project-related noise level increases are considered potentially significant under Existing with Project Buildout conditions at the noise-sensitive land uses adjacent to the following roadway segments:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7); and
- Holland Road west of Briggs Road (Segment #11).

Due to low existing traffic volumes on these roadway segments, the Project Buildout traffic volume contributions would result in potentially significant off-site traffic noise level increases under Existing with Project Buildout conditions, even though this scenario will not actually occur until the Project is built out and occupied under Year 2025 conditions. All other roadway segments would experience less than significant off-site traffic noise level impacts.

Table 4.12-17
Existing With Project Buildout Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.5	RW	87	187
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	60.2	RW	RW	60
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.4	RW	117	251
4	Menifee Rd.	n/o Holland Rd.	Residential	65.5	RW	70	150
5	Menifee Rd.	s/o Holland Rd.	Residential	64.9	RW	RW	136
6	Leon Rd.	s/o Craig Av.	Residential	67.8	RW	90	194
7	Leon Rd.	s/o Garbani Rd.	Residential	71.5	74	160	345
8	Leon Rd.	s/o Scott Rd.	Residential	69.3	RW	114	247
9	Holland Rd.	w/o Menifee Rd.	Residential	63.0	RW	RW	94
10	Holland Rd.	e/o Menifee Rd.	Residential	63.6	RW	RW	103
11	Holland Rd.	w/o Briggs Rd.	Residential	58.8	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	63.1	RW	RW	95
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.2	RW	124	267
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	70.0	RW	163	350
15	Scott Rd.	w/o Menifee Rd.	Residential	71.2	92	198	426
16	Scott Rd.	w/o Briggs Rd.	Residential	70.7	84	181	390
17	Scott Rd.	w/o Leon Rd.	Residential	70.5	82	177	382
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	81	175	377

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-18
Existing With Project Buildout Off-Site Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.3	67.5	0.3	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59.8	60.2	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.3	69.4	0.2	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.3	65.5	0.3	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	64.7	64.9	0.2	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	67.8	11.0	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	62.7	71.5	8.8	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	68.6	69.3	0.7	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	63.0	0.1	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	62.6	63.6	1.1	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	52.7	58.8	6.0	Yes	Yes
12	Holland Rd.	w/o Leon Rd.	Residential	n/a	n/a	n/a	n/a	n/a
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.0	68.2	0.2	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	69.7	70.0	0.3	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.2	71.2	1.0	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	69.4	70.7	1.2	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.3	70.5	1.2	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.1	70.4	0.3	Yes	No

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
[3] Significance Criteria (See Section 4.12.3).
"n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

EA 2021 Phase 1 Traffic Noise Level Contributions

Table 4.12-19, *EA 2021 Without Phase 1 Project Conditions*, shows the CNEL noise levels for Existing Plus Ambient Growth (EA) 2021 Without Phase 1 Project Conditions. The without Project exterior noise levels are expected to range from 53.0 to 70.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. **Table 4.12-20, *EA 2021 With Phase 1 Project Conditions***, shows that EA 2021 with Phase 1 conditions will range from 57.0 to 71.0 dBA CNEL. **Table 4.12-21, *EA 2021 With Phase 1 Off-Site Traffic Noise Impacts***, shows that Phase 1 Project traffic will generate noise level increases ranging from 0.0 to 8.6 dBA CNEL on the study area roadway segments. Project-related noise level increases are considered potentially significant under EA 2021 with Phase 1 conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7); and
- Holland Road west of Leon Road (Segment #12).

Due to low without Project traffic volumes on these roadway segments, the Phase 1 Project traffic volume contributions would result in potentially significant off-site traffic noise level increases under EA 2021 with Phase 1 conditions. All other roadway segments would experience less than significant off-site traffic noise level impacts.

Table 4.12-19
EA 2021 Without Phase 1 Project Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.5	RW	87	187
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	60.2	RW	RW	60
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.5	RW	119	256
4	Menifee Rd.	n/o Holland Rd.	Residential	65.5	RW	70	150
5	Menifee Rd.	s/o Holland Rd.	Residential	65.0	RW	64	139
6	Leon Rd.	s/o Craig Av.	Residential	56.8	RW	RW	RW
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	RW	RW	98
8	Leon Rd.	s/o Scott Rd.	Residential	68.9	RW	107	231
9	Holland Rd.	w/o Menifee Rd.	Residential	63.1	RW	RW	96
10	Holland Rd.	e/o Menifee Rd.	Residential	62.9	RW	RW	92
11	Holland Rd.	w/o Briggs Rd.	Residential	53.0	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	56.0	RW	RW	RW
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.3	RW	126	271
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	70.0	RW	163	350
15	Scott Rd.	w/o Menifee Rd.	Residential	70.5	81	176	378
16	Scott Rd.	w/o Briggs Rd.	Residential	69.7	RW	156	336
17	Scott Rd.	w/o Leon Rd.	Residential	69.5	RW	153	329
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	80	173	372

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-20
EA 2021 With Phase 1 Project Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	67.7	RW	89	191
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	60.5	RW	RW	64
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.6	RW	120	259
4	Menifee Rd.	n/o Holland Rd.	Residential	65.7	RW	71	153
5	Menifee Rd.	s/o Holland Rd.	Residential	65.1	RW	65	140
6	Leon Rd.	s/o Craig Av.	Residential	65.4	RW	63	135
7	Leon Rd.	s/o Garbani Rd.	Residential	69.5	RW	117	252
8	Leon Rd.	s/o Scott Rd.	Residential	69.3	RW	114	247
9	Holland Rd.	w/o Menifee Rd.	Residential	63.1	RW	RW	96
10	Holland Rd.	e/o Menifee Rd.	Residential	63.4	RW	RW	99
11	Holland Rd.	w/o Briggs Rd.	Residential	57.0	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	61.1	RW	RW	70
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.4	RW	127	274
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	70.1	77	166	357
15	Scott Rd.	w/o Menifee Rd.	Residential	71.0	89	192	413
16	Scott Rd.	w/o Briggs Rd.	Residential	70.4	80	173	373
17	Scott Rd.	w/o Leon Rd.	Residential	70.2	79	169	364
18	Scott Rd.	e/o Leon Rd.	Residential	70.6	83	179	386

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-21
EA 2021 With Phase 1 Off-Site Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.5	67.7	0.1	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.2	60.5	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.5	69.6	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.5	65.7	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	65.0	65.1	0.1	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	65.4	8.6	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	69.5	6.2	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	68.9	69.3	0.4	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	63.1	63.1	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	62.9	63.4	0.5	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	53.0	57.0	4.0	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	56.0	61.1	5.1	Yes	Yes
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.3	68.4	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.0	70.1	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.5	71.0	0.6	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	69.7	70.4	0.7	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.5	70.2	0.7	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	70.6	0.2	Yes	No

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
[3] Significance Criteria (See Section 4.12.3).

EA 2025 Project Buildout Traffic Noise Level Contributions

4.12-22, EA *2025 Without Project Buildout Conditions Noise Contours*, shows the EA 2025 without Project Buildout conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 54.3 to 70.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. **Table 4.12-23, *EA 2025 With Project Buildout Off-Site Traffic Noise Impacts***, shows that conditions will range from 59.1 to 71.7 dBA CNEL. As shown on **Table 4.12-23**, traffic will generate noise level increases ranging from 0.1 to 11.0 dBA CNEL on the study area roadway segments. Project-related noise level increases are considered potentially significant under EA 2025 with Project Buildout conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7); and
- Holland Road west of Leon Road (Segment #12).

Due to low without Project traffic volumes on these roadway segments, the Project Buildout traffic volume contributions would result in potentially significant off-site traffic noise level increases under EA 2025 with Project Buildout conditions. All other roadway segments would experience less than significant off-site traffic noise level impacts.

Table 4.12-22
EA 2025 Without Project Buildout Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Econ. Dev. Corridor	68.1	RW	95	205
2	Zeiders Rd.	s/o Scott Rd.	Econ. Dev. Corridor	60.8	RW	RW	67
3	Antelope Rd.	s/o Scott Rd.	Commercial	70.0	59	127	273
4	Menifee Rd.	n/o Holland Rd.	Residential	66.1	RW	76	164
5	Menifee Rd.	s/o Holland Rd.	Residential	65.5	RW	69	148
6	Leon Rd.	s/o Craig Av.	Residential	67.8	RW	90	194
7	Leon Rd.	s/o Garbani Rd.	Residential	71.6	75	162	350
8	Leon Rd.	s/o Scott Rd.	Residential	69.8	RW	124	267
9	Holland Rd.	w/o Menifee Rd.	Residential	63.5	RW	RW	101
10	Holland Rd.	e/o Menifee Rd.	Residential	64.1	RW	RW	111
11	Holland Rd.	w/o Briggs Rd.	Residential	59.1	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	63.1	RW	RW	95
13	Scott Rd.	w/o Haun Rd.	Econ. Dev. Corridor	68.8	RW	136	293
14	Scott Rd.	e/o Haun Rd.	Econ. Dev. Corridor	70.5	82	177	382
15	Scott Rd.	w/o Menifee Rd.	Residential	71.7	99	213	459
16	Scott Rd.	w/o Briggs Rd.	Residential	71.1	90	194	418
17	Scott Rd.	w/o Leon Rd.	Residential	71.0	88	190	410
18	Scott Rd.	e/o Leon Rd.	Residential	71.0	89	192	413

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-23
EA 2025 With Project Buildout Off-Site Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.9	68.1	0.2	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.5	60.8	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.8	70.0	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.9	66.1	0.2	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	65.3	65.5	0.1	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	67.8	11.0	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	71.6	8.3	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	69.2	69.8	0.6	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	63.4	63.5	0.1	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	63.1	64.1	0.9	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	54.3	59.1	4.8	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	56.3	63.1	6.8	Yes	Yes
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.6	68.8	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.3	70.5	0.2	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.8	71.7	0.9	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	70.0	71.1	1.1	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.9	71.0	1.1	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.7	71.0	0.3	Yes	No

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
[3] Significance Criteria (See Section 4.12.3).

EAC 2021 Phase 1 Traffic Noise Level Contributions

Table 4.12-24, EAC *2021 Without Phase 1 Conditions Noise Contours*, shows the Existing plus Ambient Growth plus Cumulative Developments (EAC) 2021without Phase 1 Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 59.2 to 73.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. **Table 4.12-25, EAC *2021 With Phase 1 Conditions Noise Contours***, shows that conditions will range from 60.5 to 73.4 dBA CNEL. As shown on **Table 4.12-26, EAC *2021 With Phase 1 Off-Site Traffic Noise Impacts***, Phase 1 Project traffic will generate noise level increases ranging from 0.0 to 3.8 dBA CNEL on the study area roadway segments. Project-related noise level increases are considered potentially significant under EAC 2021 with Phase 1 conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6); and
- Leon Road south of Garbani Road (Segment #7).

Due to low without Project traffic volumes on these roadway segments, the Phase 1 Project traffic volume contributions would result in potentially significant off-site traffic noise level increases under EAC 2021 with Phase 1 conditions. Note that with the addition of background traffic from cumulative developments in the Project study area, the Project increases will be reduced, however, Project-only off-site traffic noise level increases will still result in *potentially significant* impacts on roadway segments 6 and 7. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.

Table 4.12-24
EAC 2021 Without Phase 1 Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	71.6	76	163	351
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	66.5	RW	74	160
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.0	69	149	321
4	Menifee Rd.	n/o Holland Rd.	Residential	68.9	RW	116	249
5	Menifee Rd.	s/o Holland Rd.	Residential	69.0	RW	118	254
6	Leon Rd.	s/o Craig Av.	Residential	63.3	RW	RW	98
7	Leon Rd.	s/o Garbani Rd.	Residential	68.4	RW	100	215
8	Leon Rd.	s/o Scott Rd.	Residential	72.2	83	178	383
9	Holland Rd.	w/o Menifee Rd.	Residential	67.3	RW	83	180
10	Holland Rd.	e/o Menifee Rd.	Residential	67.3	RW	83	180
11	Holland Rd.	w/o Briggs Rd.	Residential	59.2	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	60.6	RW	RW	65
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	70.4	81	174	374
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	72.6	112	242	522
15	Scott Rd.	w/o Menifee Rd.	Residential	73.0	120	259	558
16	Scott Rd.	w/o Briggs Rd.	Residential	72.4	110	237	510
17	Scott Rd.	w/o Leon Rd.	Residential	71.7	99	214	461
18	Scott Rd.	e/o Leon Rd.	Residential	73.3	127	273	587

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-25
EAC 2021 With Phase 1 Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	71.7	76	164	354
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	66.6	RW	75	162
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.1	70	150	324
4	Menifee Rd.	n/o Holland Rd.	Residential	68.9	RW	117	251
5	Menifee Rd.	s/o Holland Rd.	Residential	69.0	RW	118	255
6	Leon Rd.	s/o Craig Av.	Residential	67.1	RW	82	176
7	Leon Rd.	s/o Garbani Rd.	Residential	71.3	72	156	337
8	Leon Rd.	s/o Scott Rd.	Residential	72.4	85	184	396
9	Holland Rd.	w/o Menifee Rd.	Residential	67.3	RW	83	180
10	Holland Rd.	e/o Menifee Rd.	Residential	67.5	RW	86	185
11	Holland Rd.	w/o Briggs Rd.	Residential	60.5	RW	RW	64
12	Holland Rd.	w/o Leon Rd.	Residential	63.1	RW	RW	95
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	70.4	81	175	377
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	72.6	114	245	528
15	Scott Rd.	w/o Menifee Rd.	Residential	73.3	126	272	587
16	Scott Rd.	w/o Briggs Rd.	Residential	72.8	116	251	541
17	Scott Rd.	w/o Leon Rd.	Residential	72.2	106	228	491
18	Scott Rd.	e/o Leon Rd.	Residential	73.4	129	278	598

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-26
EAC 2021 With Phase 1 Off-Site Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	71.6	71.7	0.0	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	66.5	66.6	0.1	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.0	71.1	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	68.9	68.9	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	69.0	69.0	0.0	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	63.3	67.1	3.8	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	68.4	71.3	2.9	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	72.2	72.4	0.2	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	67.3	67.3	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	67.3	67.5	0.2	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	59.2	60.5	1.4	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	60.6	63.1	2.5	Yes	No
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	70.4	70.4	0.0	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	72.6	72.6	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	73.0	73.3	0.3	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	72.4	72.8	0.4	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	71.7	72.2	0.4	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	73.3	73.4	0.1	Yes	No

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
[3] Significance Criteria (See Section 4.12.3).

EAC 2025 Project Buildout Traffic Noise Level Contributions

Table 4.12-27, EAC *2025 Without Buildout Conditions Noise Contours*, below, presents the EAC 2025 without Project Buildout Conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 60.1 to 74.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. **Table 4.12-28, EAC *2025 With Buildout Conditions Noise Contours***, shows the EAC 2025 with Project Buildout conditions will range from 61.9 to 74.3 dBA CNEL. As shown on **Table 4.12-29, EAC *2025 With Project Buildout Off-Site Traffic Noise Impacts***, Project Buildout traffic will generate noise level increases ranging from 0.0 to 4.4 dBA CNEL on the study area roadway segments. Project-related noise level increases are considered potentially significant under EAC 2025 with Project Buildout conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7); and
- Holland Road west of Leon Road (Segment #12).

Due to low without Project traffic volumes on these roadway segments, the Project Buildout traffic volume contributions would result in potentially significant off-site traffic noise level increases under EAC 2025 with Project Buildout conditions. Note that with the addition of background traffic from cumulative developments in the Project study area, the Project increases will be reduced, however, Project-only off-site traffic noise level increases will still result in potentially significant impacts on roadway segments 6, 7, and 12. All other roadway segments would experience less than significant off-site traffic noise level impacts.

Table 4.12-27
EAC 2025 Without Buildout Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	72.5	87	187	403
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	67.6	RW	88	189
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.6	76	164	352
4	Menifee Rd.	n/o Holland Rd.	Residential	69.7	RW	132	284
5	Menifee Rd.	s/o Holland Rd.	Residential	69.9	RW	136	292
6	Leon Rd.	s/o Craig Av.	Residential	65.5	RW	64	138
7	Leon Rd.	s/o Garbani Rd.	Residential	69.3	RW	114	247
8	Leon Rd.	s/o Scott Rd.	Residential	73.1	95	204	439
9	Holland Rd.	w/o Menifee Rd.	Residential	68.1	RW	95	206
10	Holland Rd.	e/o Menifee Rd.	Residential	68.2	RW	96	207
11	Holland Rd.	w/o Briggs Rd.	Residential	60.1	RW	RW	60
12	Holland Rd.	w/o Leon Rd.	Residential	61.9	RW	RW	79
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	71.1	90	193	417
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	73.3	127	273	587
15	Scott Rd.	w/o Menifee Rd.	Residential	73.8	135	292	628
16	Scott Rd.	w/o Briggs Rd.	Residential	73.2	124	267	576
17	Scott Rd.	w/o Leon Rd.	Residential	72.5	111	239	515
18	Scott Rd.	e/o Leon Rd.	Residential	74.2	144	310	669

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-28
EAC 2025 With Buildout Conditions Noise Contours

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	72.6	88	189	408
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	67.7	RW	89	191
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.7	77	166	358
4	Menifee Rd.	n/o Holland Rd.	Residential	69.8	RW	134	289
5	Menifee Rd.	s/o Holland Rd.	Residential	69.9	RW	137	294
6	Leon Rd.	s/o Craig Av.	Residential	69.6	RW	119	257
7	Leon Rd.	s/o Garbani Rd.	Residential	73.2	96	207	447
8	Leon Rd.	s/o Scott Rd.	Residential	73.4	99	213	458
9	Holland Rd.	w/o Menifee Rd.	Residential	68.2	RW	96	207
10	Holland Rd.	e/o Menifee Rd.	Residential	68.5	RW	101	217
11	Holland Rd.	w/o Briggs Rd.	Residential	61.9	RW	RW	79
12	Holland Rd.	w/o Leon Rd.	Residential	65.0	RW	59	127
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	71.2	91	196	422
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	73.4	129	278	598
15	Scott Rd.	w/o Menifee Rd.	Residential	74.2	146	314	676
16	Scott Rd.	w/o Briggs Rd.	Residential	73.7	135	291	627
17	Scott Rd.	w/o Leon Rd.	Residential	73.1	122	263	567
18	Scott Rd.	e/o Leon Rd.	Residential	74.3	147	317	682

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

Table 4.12-29
EAC 2025 With Project Buildout Off-Site Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	72.5	72.6	0.1	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	67.6	67.7	0.1	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.6	71.7	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	69.7	69.8	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	69.9	69.9	0.0	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	65.5	69.6	4.0	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	69.3	73.2	3.9	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	73.1	73.4	0.3	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	68.1	68.2	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	68.2	68.5	0.3	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	60.1	61.9	1.9	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	61.9	65.0	3.1	Yes	Yes
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	71.1	71.2	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	73.3	73.4	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	73.8	74.2	0.5	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	73.2	73.7	0.6	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	72.5	73.1	0.6	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	74.2	74.3	0.1	Yes	No

[1] Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.
[2] 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.
[3] Significance Criteria (See Section 4.12.3).

- *Off-Site Project Traffic Noise Level Impacts*

The findings above indicate that Project-related off-site traffic noise level increases will result in potentially significant noise impacts at noise-sensitive land uses adjacent to three of the 18 Project study area roadway segments, as identified below:

- Leon Road south of Craig Avenue (Segment #6);

- Leon Road south of Garbani Road (Segment #7); and
- Holland Road west of Leon Road (Segment #12).

Due to the potential noise attenuation benefits, rubberized asphalt is considered as a mitigation measure for the Project-related roadway improvements associated with Project construction. In an effort to reduce traffic noise levels at the noise source, Caltrans research has shown that rubberized asphalt can provide noise attenuation of approximately 4 dBA for automobile traffic noise levels. Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated by the interaction of the tires and pavement, especially when traveling at higher and constant speeds. According to research conducted by Caltrans and the Canadian Ministry of Transportation and Highways a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions. The 4 dBA reduction is the average reduction at distant receiving sites per the *I-80 Davis OGAC Pavement Noise Study* prepared in December 2002 and is used in this noise study as a conservative noise reduction so as to not overstate the effectiveness of rubberized asphalt mitigation over time.

By incorporating rubberized asphalt overlays into off-site roadway improvements within the County, the off-site traffic noise level increases from automobile traffic can be reduced by roughly 4 dBA at the adjacent land uses. While rubberized asphalt will provide some noise reduction, this is only effective for tire-on-pavement noise at higher speeds of Project automobile traffic, as rubberized asphalt would not reduce truck-related off-site traffic noise levels associated with truck engine and exhaust stacks to less than significant impacts.

Mitigation Measure MM-NOI-1, requiring the use of rubberized asphalt shall be implemented to reduce impacts to the following off-site roadway segments:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).

While off-site Project-related traffic noise level increases at adjacent land uses under all scenarios would be reduced, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6).

- *Off-Site Noise Barriers*

Existing and future noise-sensitive residential homes are and would be located adjacent to the impacted roadway segments in the Project study area, and therefore, off-site noise barriers are considered as potential traffic noise mitigation to reduce the impacts at the noise sensitive land uses. Off-site noise barriers are estimated to provide a readily perceptible 5 dBA reduction which, according to the FHWA, is simple to attain when blocking the line-of-sight from the noise source to the receiver.

Caltrans guidance in the Highway Design Manual, Section 1102.3(3), indicates that for design purposes, the noise barrier should intercept the line of sight from the exhaust stack of a truck to the receptor, and an 11.5-foot-high truck stack height is assumed to represent the truck engine and exhaust noise source. Therefore, any exterior noise barriers at residential homes experiencing Project-related traffic noise level increases would need to be high enough and long enough to block the line-of-sight from the noise source (at 11.5 feet high per Caltrans) to the receiver (at 5 feet high per FHWA guidance) in order to provide a 5 dBA reduction per FHWA guidance. To break the line of sight, a minimum exterior noise barrier height of 8 feet is estimated to be required for the residential outdoor living areas adjacent to the impacted roadway segments. According to FHWA guidance, outdoor living areas are generally limited to outdoor living areas of frequent human use (e.g., backyards of single-family homes). Therefore, front and side yards of residential homes adjacent to off-site roadway segments do not represent noise-sensitive areas of frequent human use that require exterior noise mitigation.

Exterior noise mitigation in the form of minimum 8-foot high noise barriers for the land uses adjacent to the impacted roadway segments is not anticipated to provide the FHWA attainable reduction of 5 dBA required to reduce the off-site traffic noise level increases as their construction would also require potential openings for driveway access for, and the approval of, individual residential lots adjacent to each road. As such, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable.

On-Site Transportation Noise Impacts

- *On-Site Traffic Noise Prediction Model Inputs*

The on-site roadway parameters including the ADT volumes are shown on **Table 4.12-30, *On-Site Roadway Parameters***. Based on the Circulation Element, Leon Road is classified as a 4-lane Arterial, Holland Road is classified as a 4-lane Major, and Eucalyptus Road and Craig Avenue are classified as 4-lane Secondary roadways. The maximum two-way traffic volumes at a level of service C, shown on **Table 4.12-30**, were obtained from Figure C-3 of the County General Plan Circulation Element and reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures that address the worst-case future noise conditions. Consistent with the County of Riverside Office of Industrial Hygiene noise study requirements, hard site conditions were used to analyze the potential on-site traffic noise impacts for the Project study area. Hard site conditions account for the sound propagation loss over a reflective surface between the source and the receiver.

Table 4.12-30
On-Site Roadway Parameters

Roadway	Lanes	Classification[1]	Average Daily Traffic Volume[2]	Speed Limit (mph)[3]	Site Conditions[4]
Leon Rd.	4	Arterial	28,700	40	Hard
Holland Rd.	4	Major	27,300	40	Hard
Eucalyptus Rd.	4	Secondary	20,700	40	Hard
Craig. Av.	4	Secondary	20,700	40	Hard

[1] Road classifications based upon the County of Riverside General Plan Circulation Element.
[2] Source: County of Riverside General Plan Circulation Element, Figure C-3, based on the County of Riverside Office of Industrial Hygiene Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures.
[3] Roadway speeds are based on the County of Riverside Office of Industrial Hygiene 40 mph noise study guideline speed.
[4] Source: County of Riverside Office of Industrial Hygiene.

To predict the future noise environment at residential lots 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, showing the plotting of the residential lots in relationship to Leon Road, Holland Road, Eucalyptus Road, and Craig Avenue.

The outdoor living area (backyard) and first-floor exterior noise level receivers were placed five feet above the pad elevation, or three feet above the pad elevation (backyard) when the barrier height exceeds six feet per County noise study guidelines. All second-floor receivers were located 14 feet above the proposed finished floor elevation.

An on-site exterior noise impact analysis was conducted to determine the traffic noise exposure and to identify potential necessary noise abatement measures for the proposed Project. It is expected that the primary source of noise impacts to the Project site will be traffic noise from Leon Road, Holland Road, Eucalyptus Road, and Craig Avenue. The Project will also experience some background traffic noise impacts from the Project's internal local streets; however, due to the low traffic volume/speeds, traffic noise from these roads will not make a significant contribution to the noise environment beyond of the right-of-way of the roadways.

- <u>On-Site Exterior Noise Analysis</u>

Using the FHWA traffic noise prediction model and the parameters outlined in **Table 4.12-11, *Time of Day Vehicle Splits*, Table 4.12-12, *Distribution of Traffic Flow by Vehicle Type (Vehicle Mix),*** and **Table 4.12-30, *On-Site Roadway Parameters***, the expected future exterior noise levels at the outdoor living areas (backyards) of single-family lots were calculated. **Table 4.12-31, *Exterior Noise Levels, (CNEL)***, presents a summary of future exterior noise level impacts at the outdoor living areas (backyards) within the Project site. The future unmitigated exterior traffic noise levels are shown to range from 65.3 to 75.1 dBA CNEL and exceed the

County 65 dBA CNEL standard for residential uses, therefore, impacts are considered potentially significant.

Table 4.12-31
Exterior Noise Levels (CNEL)

Lot Number	Roadway	Unmitigated Exterior Noise Level (dBA CNEL)	Mitigated Exterior Noise Level (dBA CNEL)	Barrier Height (Feet)	Exterior Noise Level Threshold (dBA CNEL)[1]	Threshold Exceeded?
38	Holland Rd.	74.8	63.5	8.0'	65	No
146	Holland Rd.	74.8	64.6	8.0'	65	No
29	Leon Rd.	70.9	62.9	6.0'	65	No
344	Leon Rd.	75.1	64.3	8.0'	65	No
158	Eucalyptus Rd.	70.1	63.4	6.0'	65	No
472	Eucalyptus Rd.	65.3	59.7	6.0'	65	No
350	Craig. Av.	70.1	63.8	6.0'	65	No
564	Craig. Av.	70.0	63.8	6.0'	65	No

[1] Source: County of Riverside Office of Industrial Hygiene noise study guidelines.

To satisfy the 65 dBA CNEL exterior noise level standards for residential land use, **Mitigation Measure MM-NOI-2** shall be implemented. The construction of 6 to 8 foot high noise barriers is required in order to reduce exterior noise impacts. The locations for these noise barriers are depicted on **Figure 4.12-4, *Summary of Recommendations***.

FIGURE 4.12-4
SUMMARY OF RECOMMENDATIONS

Source: Noise Study (**Appendix J**)

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With the recommended noise barriers, the mitigated future exterior noise levels will range from 59.7 to 64.6 dBA CNEL and impacts will be reduced to less than significant. The recommended noise barriers will satisfy the County65 dBA CNEL exterior noise level standards for residential land use. The effective noise barrier height recommendations represent the minimum wall and/or berm combination height required to satisfy the County exterior noise level standards.

- On-Site Interior Noise Analysis

To ensure that the interior noise levels comply with the County 45 dBA CNEL interior noise standard for residential land use, future noise levels were calculated at the first and second-floor building façades.

Noise Reduction Methodology

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 will 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.

Interior Noise Level Assessment

Table 4.12-32, *First Floor Interior Noise Impacts (CNEL)*, and **Table 4.12-33**, ***Second Floor Interior Noise Impacts (CNEL)***, indicate that the residential homes within the Project site will require a windows-closed condition and a means of mechanical ventilation (e.g. air conditioning). **Table 4.12-32** shows that the future unmitigated noise levels at first-floor building façades are expected to range from 59.8 to 67.8 dBA CNEL.

Table 4.12-32
First Floor Interior Noise Impacts (CNEL)

Lot Number	Roadway	Noise Level @ Façade[1]	Required Interior NR[2]	Estimated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
38	Holland Rd.	66.3	21.3	25.0	No	41.3	45	No
146	Holland Rd.	67.8	22.8	25.0	No	42.8	45	No
29	Leon Rd.	65.5	20.5	25.0	No	40.5	45	No
344	Leon Rd.	67.1	22.1	25.0	No	42.1	45	No
158	Eucalyptus Rd.	63.1	18.1	25.0	No	38.1	45	No
472	Eucalyptus Rd.	59.8	14.8	25.0	No	34.8	45	No
350	Craig. Av.	63.2	18.2	25.0	No	38.2	45	No
564	Craig. Av.	63.3	18.3	25.0	No	38.3	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 standard of 45 dBA CNEL for residential use.
[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.
"NR" = Noise Reduction

Table 4.12-33, *Second Floor Interior Noise Impacts (CNEL)*, shows that the future unmitigated noise levels at second-floor building façades are expected to range from 65.1 to 74.5 dBA CNEL.

Table 4.12-33
Second Floor Interior Noise Impacts (CNEL)

Lot Number	Roadway	Noise Level @ Façade[1]	Required Interior NR[2]	Estimated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Threshold	Threshold Exceeded?
38	Holland Rd.	74.2	29.2	30.0	Yes	44.2	45	No
146	Holland Rd.	74.2	29.2	30.0	Yes	44.2	45	No
29	Leon Rd.	70.7	25.7	30.0	Yes	40.7	45	No
344	Leon Rd.	74.5	29.5	30.0	Yes	44.5	45	No
158	Eucalyptus Rd.	69.4	24.4	25.0	No	44.4	45	No
472	Eucalyptus Rd.	65.1	20.1	25.0	No	40.1	45	No
350	Craig. Av.	69.4	24.4	25.0	No	44.4	45	No
564	Craig. Av.	69.3	24.3	25.0	No	44.3	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 standard of 45 dBA CNEL for residential use.
[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.
"NR" = Noise Reduction

To satisfy the County 45 dBA CNEL residential interior noise level standard, Project residential homes will require a Noise Reduction (NR) of up to 29.5 dBA. **Mitigation Measure MM-NOI-3** shall be implemented. Construction methods pertaining to windows/sliding glass doors, exterior doors (non-glass), exterior walls, roofs, and ventilation are required in order to reduce interior noise impacts. The locations where these building design components are required are depicted on **Figure 4.12-4, *Summary of Recommendations***.

With the interior noise mitigation measures provided in this study, the proposed Project is expected to satisfy the County 45 dBA CNEL interior noise level standard for residential development.

Temporary Noise Impacts

Due to the proximity of adjacent residences, immediately west of the Project site, the potential exists for significant temporary noise impacts from the proposed Project. Temporary increases in ambient noise levels will only occur during the construction phase and as a result of infrequent drainage facility maintenance. These impacts will be of short duration and will substantially decrease once the construction phase of the Project is completed. Precautions are taken to ensure the safety construction workers.

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers and portable generators that when combined can reach high levels.

The Project will be required to comply with **Ordinance No. 847** which indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. This is included as **Standard Condition SC-NOI-1**. This is a standard condition and is not considered unique mitigation under CEQA.

Operationally, the Project will result in noise sources typical of residential developments and drainage facilities including personal vehicles, landscape equipment, flood control maintenance equipment and delivery and service vehicles. Periodic noises that may be generated by the proposed parking lots include landscaping maintenance, drainage facility maintenance, solid waste disposal, conversations and/or yelling in parking lots, vehicle doors closing, and car alarms.

In addition, noise may be associated with the lift station. This may be a result of temporary operational functions or testing of the back-up generator system.

Construction Noise Analysis

Temporary noise increases from short-term construction activities will occur during the construction phase of the Project. **Table 4.12-34, *Construction Reference Noise Levels***, below, shows noise levels at construction activity boundaries in relation to the nearby sensitive receiver locations.

Table 4.12-34
Construction Reference Noise Levels

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L_{eq})	Reference Noise Levels @ 50 Feet (dBA L_{eq})[6]
1	Truck Pass-Bys & Dozer Activity[1]	30'	63.6	59.2
2	Dozer Activity[1]	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities[2]	30'	71.9	67.5
4	Foundation Trenching[2]	30'	72.6	68.2
5	Rough Grading Activities[2]	30'	77.9	73.5
6	Framing[3]	30'	66.7	62.3
7	Two Scrapers Pass-By[4]	30'	83.7	79.3
8	Concrete Mixer Truck Movements[5]	50'	71.2	71.2
9	Concrete Paver Activities[5]	30'	70.0	65.6
10	Concrete Mixer Pour & Paving Activities[5]	30'	70.3	65.9
11	Concrete Mixer Backup Alarms & Air Brakes[5]	50'	71.6	71.6
12	Concrete Mixer Pour Activities[5]	50'	67.7	67.7

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.
[4] As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.
[5] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[6] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

Construction Noise Levels

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 62 dBA to in excess of 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per 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.

Construction Reference Noise Levels

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. **Table 4.12-34, *Construction Reference Noise Levels,*** provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on **Table 4.12-34** have been adjusted to describe a common reference distance of 50 feet.

Construction Noise Analysis

Table 4.12-35, *Site Preparation Equipment Noise Levels*, **Table 4.12-36, *Grading Equipment Noise Levels***, **Table 4.12-37, *Building Construction Equipment Noise Levels***, **Table 4.12-38, *Paving Equipment Noise Levels***, and **Table 4.12-39, *Architectural Coating Equipment Noise Levels***, show the stages of Project construction and identify the construction noise levels for each stage. Based on the reference construction noise levels, the unmitigated Project-related construction noise levels when the highest reference noise level is operating at a single point nearest the sensitive receiver location from the center of primary construction activity will range from 58.6 to 71.0 dBA L_{eq} at the sensitive receiver locations in the County.

Table 4.12-35
Site Preparation Equipment Noise Levels

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	64.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	318'	-16.1	0.0	48.1
R2	282'	-15.0	0.0	49.1
R3	130'	-8.3	0.0	55.9
R4	540'	-20.7	0.0	43.5
R5	130'	-8.3	0.0	55.9
R6	130'	-8.3	0.0	55.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

Table 4.12-36
Grading Equipment Noise Levels

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Two Scrapers Pass-By	79.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	79.3

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	318'	-16.1	0.0	63.2
R2	282'	-15.0	0.0	64.2
R3	130'	-8.3	0.0	71.0
R4	540'	-20.7	0.0	58.6
R5	130'	-8.3	0.0	71.0
R6	130'	-8.3	0.0	71.0

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

Table 4.12-37
Building Construction Equipment Noise Levels

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Construction Vehicle Maintenance Activities	67.5
Foundation Trenching	68.2
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	68.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	318'	-16.1	0.0	52.1
R2	282'	-15.0	0.0	53.1
R3	130'	-8.3	0.0	59.9
R4	540'	-20.7	0.0	47.5
R5	130'	-8.3	0.0	59.9
R6	130'	-8.3	0.0	59.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

Table 4.12-38
Paving Equipment Noise Levels

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Concrete Mixer Truck Movements	71.2
Concrete Paver Activities	65.6
Concrete Mixer Pour & Paving Activities	65.9
Concrete Mixer Backup Alarms & Air Brakes	71.6
Concrete Mixer Pour Activities	67.7
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	71.6

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	318'	-16.1	0.0	55.5
R2	282'	-15.0	0.0	56.6
R3	130'	-8.3	0.0	63.3
R4	540'	-20.7	0.0	50.9
R5	130'	-8.3	0.0	63.3
R6	130'	-8.3	0.0	63.3

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

Table 4.12-39
Architectural Coating Equipment Noise Levels

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	62.3

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	318'	-16.1	0.0	46.2
R2	282'	-15.0	0.0	47.2
R3	130'	-8.3	0.0	54.0
R4	540'	-20.7	0.0	41.6
R5	130'	-8.3	0.0	54.0
R6	130'	-8.3	0.0	54.0

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

- *Off-Site Construction Activity Noise Analysis*

As a part of Project construction, an off-site channel, sewer line, and lift station will be constructed adjacent to receiver locations located further from the Project site. As such, this analysis identifies off-site receiver ("OR") locations, OR1 to OR5, adjacent to Project off-site construction activity locations as shown on **Figure 4.12-5, *Construction Activity and Receiver Locations***.

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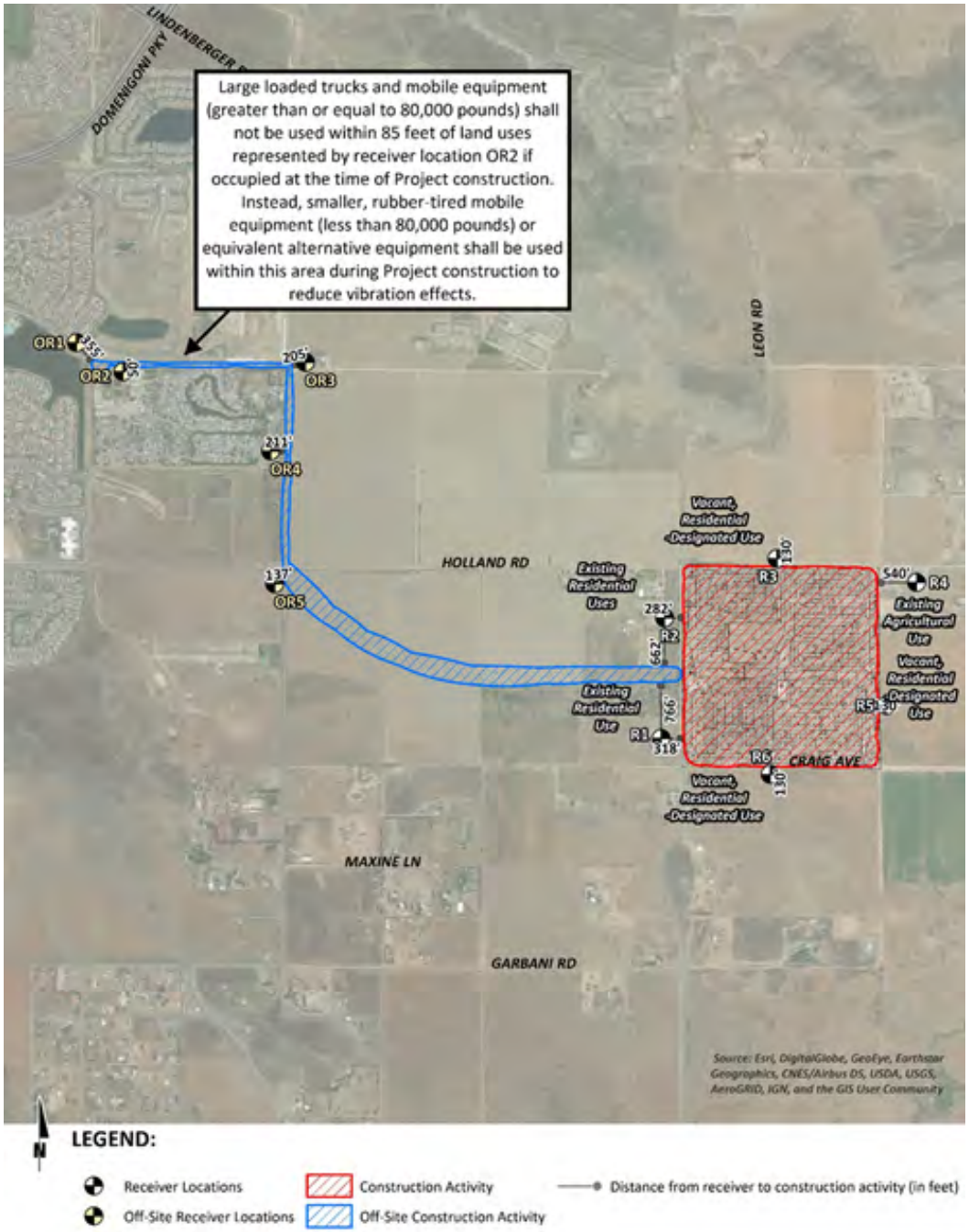
FIGURE 4.12-5
TYPICAL LEVELS OF GROUND-BORNE VIBRATION



Source: Noise Study (**Appendix J**)

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Table 4.12-40, ***Off-Site Construction Equipment Noise Levels***, shows the off-site construction activity noise levels at both the off-site receiver locations, and receiver locations R1 and R2 which are located adjacent to the Project site and off-site construction activities. As shown on **Table 4.12-40**, off-site construction activity noise levels are expected to range from 44.5 to 68.2 dBA L_{eq} at distances ranging from 50 to 766 feet from off-site construction activities.

Table 4.12-40
Off-Site Construction Equipment Noise Levels

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Foundation Trenching	68.2
Concrete Paver Activities	65.6
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	68.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
OR1	355'	-17.0	0.0	51.1
OR2	50'	0.0	0.0	68.2
OR3	205'	-12.3	0.0	55.9
OR4	211'	-12.5	0.0	55.7
OR5	137'	-8.8	0.0	59.4
R1	766'	-23.7	0.0	44.5
R2	662'	-22.4	0.0	45.7

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.
"OR" = Off-Site Receiver

- *Construction Noise Thresholds of Significance Analysis*

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the edge of primary Project construction activities. As shown on **Table 4.12-41**, ***Unmitigated Construction Equipment Noise Level Summary***, the unmitigated construction noise levels are expected to range from 51.1 to 71.0 dBA L_{eq} at the sensitive receiver locations.

Table 4.12-41
Unmitigated Construction Equipment Noise Level Summary

Receiver Location[1]	Construction Noise Level (dBA L_{eq})						
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Off-Site Channel & Sewer	Highest Activity Noise Levels[2]
R1	48.1	63.2	52.1	55.5	46.2	44.5	63.2
R2	49.1	64.2	53.1	56.6	47.2	45.7	64.2
R3	55.9	71.0	59.9	63.3	54.0	-	71.0
R4	43.5	58.6	47.5	50.9	41.6	-	58.6
R5	55.9	71.0	59.9	63.3	54.0	-	71.0
R6	55.9	71.0	59.9	63.3	54.0	-	71.0
OR1	-	-	-	-	-	51.1	51.1
OR2	-	-	-	-	-	68.2	68.2
OR3	-	-	-	-	-	55.9	55.9
OR4	-	-	-	-	-	55.7	55.7
OR5	-	-	-	-	-	59.4	59.4

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during peak operating conditions.
"OR" = Off-Site Receiver

Table 4.12-42, *Construction Noise Level Compliance*, shows the highest on-site and off-site construction noise levels at the potentially impacted receiver locations approaching 71.0 dBA L_{eq} will satisfy the NIOSH 85 dBA L_{eq} significance threshold during temporary Project construction activities. Therefore, the unmitigated noise impact due to Project construction is considered less than significant.

Table 4.12-42
Construction Noise Level Compliance

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	63.2	85	No
R2	64.2	85	No
R3	71.0	85	No
R4	58.6	85	No
R5	71.0	85	No
R6	71.0	85	No
OR1	51.1	85	No
OR2	68.2	85	No
OR3	55.9	85	No
OR4	55.7	85	No
OR5	59.4	85	No

[1] Noise receiver locations are shown on **Figure 4.12-6, *Construction Activity and Receiver Locations***.
[2] Estimated construction noise levels during peak operating conditions, as shown on **Table 4.12-42**, ***Unmitigated Construction Equipment Noise Level Summary***.
[3] Construction noise standards as shown on Section 4.12.3, above.
[4] Do the estimated Project construction noise levels satisfy the construction noise level threshold?

Best Management Practices, included as **Mitigation Measures MM-NOI-4** through **MM-NOI-8**, and adherence to **Standard Condition SC-NOI-1** (see Section 4.12.5) would further reduce noise and vibration levels produced by the construction equipment to the nearby sensitive residential land uses. With implementation of **Mitigation Measures MM-NOI-4** through **MM-NOI-8** and adherence to **Standard Condition SC-NOI-1**, the Project-related noise impacts at the nearby receiver locations will be less than significant impact during the worst-case construction activities.

THRESHOLD 33.b: Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant With Mitigation Incorporated

This analysis focuses on 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.

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 4.12-43, *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: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$.

Table 4.12-43
Vibration Source Levels for Construction Equipment

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Temporary increases in ground-borne vibration or ground-borne noise levels will occur during the construction phase only. These impacts will be of short duration and will cease once the construction phase of the Project is completed.

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to building, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on **Table 4.12-43**, and the construction vibration assessment methodology published

by the FTA, it is possible to estimate the Project vibration impacts. **Table 4.12-44**, ***Unmitigated Construction Equipment Vibration Levels***, presents the expected Project related vibration levels at each of the sensitive receiver locations.

Table 4.12-44
Unmitigated Construction Equipment Vibration Levels

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Velocity Levels (in/sec)[3]	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration		
R1	318'	0.000	0.001	0.002	0.002	0.002	0.001	No
R2	282'	0.000	0.001	0.002	0.002	0.002	0.002	No
R3	130'	0.000	0.003	0.006	0.008	0.008	0.005	No
R4	540'	0.000	0.000	0.001	0.001	0.001	0.001	No
R5	130'	0.000	0.003	0.006	0.008	0.008	0.005	No
R6	130'	0.000	0.003	0.006	0.008	0.008	0.005	No
OR1	355'	0.000	0.001	0.001	0.002	0.002	0.001	No
OR2	50'	0.001	0.012	0.027	0.031	0.031	0.022	Yes
OR3	205'	0.000	0.001	0.003	0.004	0.004	0.003	No
OR4	211'	0.000	0.001	0.003	0.004	0.004	0.003	No
OR5	137'	0.000	0.003	0.006	0.007	0.007	0.005	No

[1] Receiver locations are shown on **Figure 4.12-5, *Construction Activity and Receiver Locations***.
[2] Based on the Vibration Source Levels of Construction Equipment included on **Table 4.12-43, *Vibration Source Levels for Construction Equipment***.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Does the vibration level exceed the maximum acceptable vibration threshold?

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec PPV at 25 feet. At distances ranging from 50 to 540 feet from the Project construction activities, construction vibration velocity levels are expected to range from 0.001 to 0.031 in/sec PPV, as shown on **Table 4.12-44**.

To assess the human perception of vibration levels in PPV, as previously discussed in Section 3, the velocities are converted to RMS vibration levels based on the Caltrans Transportation and Construction Vibration Guidance Manual conversion factor of 0.71. **Table 4.12-44** shows the construction vibration levels in RMS are expected to range from 0.001 to 0.022 in/sec at the nearby sensitive receiver locations, which will exceed the County vibration level threshold of 0.01 in/sec RMS at one off-site receiver location, OR2, if Project construction activities occur within 85 feet of occupied noise-sensitive receiver locations. Therefore, the Project-related vibration impacts will be potentially significant at receiver location OR2 during the off-site construction activities. All other receiver locations will experience less than significant vibration

impacts due to Project construction.

Mitigation Measures MM-NOI-4 through **MM-NOI-8** and **Standard Condition SC-NOI-1** (see Section 4.12.5) shall be implemented to reduce construction vibration levels produced by the construction equipment to the nearby sensitive land uses**. Table 4.12-45, *Mitigated Construction Equipment Vibration Levels***, shows the mitigated Project construction vibration levels with the 85-foot buffer zone. In addition, the Best Management Practices, included as **Mitigation Measures MM-NOI-4** through **MM-NOI-8** and **Standard Condition SC-NOI-1** would further reduce noise and vibration levels produced by the construction equipment to the nearby sensitive residential land uses. With implementation of **Mitigation Measures MM-NOI-4** through **MM-NOI-8** and **Standard Condition SC-NOI-1**, the Project-related vibration impacts at the nearby receiver locations represents a less than significant impact during the worst-case construction activities.

Table 4.12-45
Mitigated Construction Equipment Vibration Levels

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Velocity Levels (in/sec)[3]	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration		
OR2	50'	0.001	0.012	-	-	0.012	0.009	No

[1] Receiver locations are shown on **Figure 4.12-5, *Construction Activity and Receiver Locations***.
[2] Based on the Vibration Source Levels of Construction Equipment included on **Table 4.12-43, *Vibration Source Levels for Construction Equipment***.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Does the vibration level exceed the maximum acceptable vibration threshold?

The vibration levels due to Project construction do not represent vibration levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV. The peak Project-construction vibration levels shown on **Table 4.12-44**, approaching 0.031 in/sec PPV, will remain below the FTA vibration levels for building damage at the residential homes near the Project site. The levels at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

4.12.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The following standard conditions were identified in the IS as it pertains to Noise:

SC-NOI-1 **Ordinance No. 847 indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May.**

Mitigation Measure(s)

The following mitigation measures are provided to reduce potential on-site and off-site noise and vibration impacts from the Project:

Off-site Traffic Noise Impacts

MM-NOI-1 **Rubberized asphalt overlays into off-site roadway improvements shall be implemented to reduce impacts to the following off-site roadway segments:**

- **Leon Road south of Craig Avenue (Segment #6);**
- **Leon Road south of Garbani Road (Segment #7);**
- **Holland Road west of Leon Road (Segment #12).**

Street improvement plans shall be submitted to the County Transportation Department for review and approval, which contain the specifications necessary to reduce traffic noise level increases from automobile traffic by roughly 4 dBA to uses adjacent to the above referenced off-site roadway segments.

All street improvements shall be installed consistent with approved plans.

On-Site Exterior Noise Mitigation

MM-NOI-2 **Prior to building permit issuance, wall plans shall be submitted to the Building and Department for review and approval. Said wall plans shall incorporate the following noise barriers, consistent with Figure 4.12-5, *Summary of Recommendations* of Subchapter 4.12 of the Draft EIR:**

- **8-foot high noise barriers for outdoor living areas (backyards) of lots 31 to 50, 136 to 149,151 to 153, and 334 to 340 adjacent to Leon Road and Holland Road; and**
- **6-foot high noise barriers for outdoor living areas (backyards) of lots 7 to 30, 154, 157 to 162, 287 to 296, 347 to 360, 464 to 472, and 558 to 574 adjacent to Eucalyptus Road and Craig Avenue.**

On-Site Interior Noise Mitigation

MM-NOI-3 **Prior to building permit issuance for all units, unless specified otherwise, building construction documents shall be submitted to the Building and Department for review and approval. Said wall plans shall incorporate the following design components, consistent with Figure 4.12-5, *Summary of Recommendations* of Subchapter 4.12 of the Draft EIR:**

Windows/Sliding Glass Doors: All residential units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and comply with the following sound transmission class (STC) ratings:

- **Upgraded windows and sliding glass doors with minimum STC ratings of 32 are required for all windows/glass doors facing Leon Road and Holland Road in lots 31 to 50, 136 to 149,151 to 153, and 334 to 340;**
- **All other residential lots require windows/glass doors with minimum sound transmission class (STC) ratings of 27.**

Exterior Doors (Non-Glass): All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27.

Exterior Walls: 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: 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.

Ventilation: Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. 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.

Construction and Vibration Mitigation

MM-NOI-4 **Large loaded trucks and mobile equipment (greater than or equal to 80,000 pounds) shall not be used within 85 feet of land uses represented by receiver location OR2 if occupied at the time of Project construction, as shown on Figure 4.12-6, Construction Activity and Receiver Locations of Subchapter 4.12 of the Draft EIR. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used by the Project contractor within this area during Project construction to reduce vibration effects.**

MM-NOI-5 **Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 6:00 a.m. to**

6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May (County of Riverside Ordinance No. 847). The Project construction supervisor shall ensure compliance with the note and the County shall conduct periodic inspection at its discretion.

MM-NOI-6 **During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.**

MM-NOI-7 **During all Project site construction, The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., to the center).**

MM-NOI-8 **During all Project site construction, the construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May). The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.**

4.12.6 Cumulative Impacts

For the proposed Project, cumulative impacts are the incremental effects of the proposed Project when viewed in connection with the effects of past, current, and potential future projects within the cumulative impact area of the County of Riverside. The cumulative impact area for the Project is the site and its immediate environs.

The Initial Study indicated that there would be no impacts from the Project such that it would expose people residing or working in the Project area to excessive noise levels due to being 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, or expose people residing or working in the Project area to excessive noise levels due to being located within the vicinity of a private airstrip, or any railroad noise. No cumulative impacts would result.

Construction impacts will be less than significant. However, Best Management Practices, included as **Mitigation Measures MM-NOI-4** through **MM-NOI-8** and adherence to **Standard Condition SC-NOI-1** would further reduce noise levels produced by the construction equipment to the nearby sensitive residential land uses. These will not be cumulative impacts.

Mitigation Measure MM-NOI-1, requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with

incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable, and area cumulative impact.

To satisfy the 65 dBA CNEL exterior noise level standards for residential land use, **Mitigation Measure MM-NOI-2** shall be implemented. Impacts will be reduced to a less than significant level. There will be no cumulative impacts.

To satisfy the County's 45 dBA CNEL residential interior noise level standard, **Mitigation Measure MM-NOI-3** shall be implemented. Impacts will be reduced to a less than significant level. There will be no cumulative impacts.

4.12.7 Unavoidable Significant Adverse Impacts

Mitigation Measure MM-NOI-1 requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable.

4.13 POPULATION AND HOUSING

4.13.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of population and housing from implementation of the Project. The Population and Housing Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

35. Housing.

a. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
b. Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?
d. Affect a County Redevelopment Project Area?
e. Cumulatively exceed official regional or local population projections?
f. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 35.a through 35.e, related to population and housing (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified either "no impact" or "less than significant impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining one (1) issue area 35.f, related to population and housing in the questions asked above, **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. A minor revision was made to the text in issue area 35.f; this revision will be reflected in the DEIR.

No standard conditions or mitigation measures have been carried over to this DEIR from the IS.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- Harvest Valley/Winchester Area Plan (Table 2: Statistical Summary of Harvest Valley/Winchester Area Plan) https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633
- Southern California Association of Governments Final 2016 Regional Transportation Plan (RTP) Demographics & Growth Forecast http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf
- County of Riverside General Plan *(General Plan Amendment No. 960, Appendix F-1-*

Population and Employment Forecasts, and *Appendix E-2, Socioeconomic Build-out Assumptions and Methodology)*
https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- 2010 U.S. Census
https://www.census.gov/2010census/

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding population and housing were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issue 35.f. is the focus of the following evaluation of population and housing.

4.13.2 Environmental Setting

4.13.2.1 Population and Housing Setting

Riverside County updated its General Plan (General Plan Amendment No. 960) in 2016 and the Housing Element for the next RHNA "planning period" from October 2013 to October 2021 (5th cycle) in a separate process outside of General Plan Amendment No. 960. The *Riverside County General Plan Amendment 960 Environmental Impact Report No. 521 Public Review Draft* released February 2015 relies on the data and analysis from the most recently adopted General Plan Housing Element (4th cycle; General Plan Amendment No. 1097.) The County's General Plan Update EIR No. 521 (Final EIR) states that employment in Riverside County rose by 32,300 jobs between 2004 and 2013.

The GPA No. 960 EIR relies on the Riverside County Center for Demographics Research data to conclude the following. "First, a comparison between the build out projections for the existing General Plan and project (GPA No. 960) scenarios indicates the net result of the project would be to slightly decrease the planned capacity of Riverside County, i.e., the number of people, homes and jobs expected in Riverside County at full build out (2060). Specifically, housing would be decreased by 2.0%, population by 1.4% and employment by 5.6%. These decreases are due primarily to GPA No. 960's proposed revisions to existing overlays, policy areas and study areas in the General Plan. A number of these overlays and policy areas where found to have planned for more urban development than could be supported for a given area due to various factors (e.g., distance from existing urban centers or infrastructure, lack of potable water, presence of sensitive habitat, etc.). GPA No. 960 proposals would correct this issue with the resultant decreases as seen in Table 4.3-G (Comparison of Regional Projections), particularly for employment."

"Second, as with the existing General Plan, the amended General Plan would accommodate a substantial amount of growth within unincorporated Riverside County between now and build out. The housing supply would more than double under both scenarios. Population would grow even more, by roughly 269% and 264%, respectively, and employment would more than quadruple for both scenarios. The existing General Plan shows jobs increasing to nearly 500,000. Under the project scenario, jobs would increase slightly less, to roughly 462,000. This is still, however, a 463% increase over existing levels."

Population projections by the Southern California Association of Governments (SCAG) rely on land use designations (i.e., local general plans) as they exist at the time of the analysis. SCAG's regional growth forecast for the Project site and the surrounding cities (Subregion) identifies a population of 1,578,700 in 2012 and forecasts a population of 2,177,500 in 2040 (a 38% increase).

Reference **Table 4.13-1, *Riverside County Projections 2018***, for population projections for Riverside County for the years 2012 through 2040.

Table 4.13-1
Riverside County Projections 2018

Riverside County	2012	2020	2025	2030	2040
Population	2,189,641	2,649,781	2,924,791	3,177,311	3,103,100

Source: 2016-2040 Regional Transportation Plan (RTP) Growth Forecast

Table 4.13-2, *SCAG Subregion Forecasts*, identifies and forecasts population for the 19 cities in the Western Riverside Council of Governments (WRCOG): Menifee, Jurupa Valley, Riverside, Eastvale, Norco, Corona, Perris, Canyon Lake, Lake Elsinore, Wildomar, Banning, Beaumont, Calimesa, San Jacinto, Hemet, Moreno Valley, Perris, Murrieta and Temecula.

Table 4.13-2
SCAG Subregion Forecasts

Cities in the WRCOG	2012	2020	2040
Population	1,578,700	1,987,151	2,177,500
Households	509,800	646,292	786,000
Employment	493,343	617,127	680,469

Sources: 2012-2035 and 2016-2040 Regional Transportation Plan (RTP) Growth Forecast, and HVWAP 2016.

Further refined population estimates for the 6 cities that surround the Project site, including Menifee, Riverside, Perris, Lake Elsinore, Wildomar, and Corona, are shown in **Table 4.13-3**, ***SCAG Local Area Forecasts***. SCAG population forecasts for unincorporated Riverside County are not included in **Table 4.13-3** because Riverside County includes communities distant and removed from the Project site, such as communities closer to the border of Los Angeles and Orange counties to the west, and desert communities to the east.

Table 4.13-3
SCAG Local Area Forecasts

Local Area	2012	2020	2040
Population	706,100	689,400	964,400
Households	254,100	206,200	304,500
Employment	228,600	329,200	389,800

Source: 2016-2040 Regional Transportation Plan (RTP) Growth Forecast

The General Plan contains two levels of policies – policies applicable countywide, and area-plan level policies contained in each of the 19 area plans. The Harvest Valley/Winchester Area Plan (*HVWAP*) contains the following forecast of population in the area plan in 2020:

According to *Table 2: Statistical Summary of Harvest Valley/Winchester Area Plan*, the Medium Density Residential (MDR) zone of the Community Development Foundation Component includes 6,336 acres at a density of 2 – 5 dwelling units per acre.

The Appendix E-2, *Socioeconomic Build-out Assumptions and Methodology* of the General Plan identifies density ranges for each Land Use Designation and establishes statistical generation factors for: population for each of the 19 area plan areas. The *HVWAP* then applies that information to forecast density, population and employment information for the 2020 build out of the *HVWAP*.

In this case, the General Plan identifies 3.5 dwelling units per acre (the midpoint between the 2 – 5 dwelling units per acre density range) for the MDR designation in the Community Development Foundation Component and identifies 2.91 people per house as the average number of people in the *HVWAP*.

Applying the General Plan density factors to the proposed Project, the 158.18-acre Project site would accommodate 554 dwelling units (158.18 acres x 3.5 du per acre = 554 du) and the 554 dwelling units would accommodate 1,613 people (554 dwelling units x 2.91 people per dwelling unit = 1,613 people (1,612.14)).

The *HVWAP* identifies the working population within the area plan as .317 of the population (34,807 workers in the Community Development Foundation component ÷ 109,497 people = .317 workers per one member of the population) which equates to: 439 employed people (1,613 x .317) living in the Project.

By comparison, the Project is proposing 574 single-family residences, which would accommodate 1,671 people (574 dwelling units x 2.91 persons per dwelling unit = 1,671 (1,670.34)) of which 530 would work (1,670.34 x .317 = 530 (529.49) workers. This analysis is represented by the following equation:

[(Total projected population in the *HVWAP* in 2020 - projected area population) +
proposed Project population = Increased total]
[(112,797–1,613) + 1,671 = 112,855]

By this analysis, the proposed Project will result in an increase of 58 people in the Project site compared to the density forecast in the General Plan.

The Project site represents 1% percent (0.01) of the *HVWAP*'s total acreage (158.18 ÷ 13,654 = 0.01) and the 58-additional people resulting from the Project represents a 0.051% (0.00051) increase in population within that 1% of the *HVWAP* area.

Further, the Project's anticipated population of 1,671 persons represents 17/100ths (0.0017) of the *HVWAP* population (1,671 ÷ 964,400) in 2020, and .08% of the forecasted population of the WRCOG subarea in 2040 (1,671 ÷ 2,177,500 = 0.00077).

Local Projections

As shown in **Table 4.13-4, *Population Forecasts***, the population of Riverside County was estimated to be 1,733,694 in 2010 and is estimated to have increased to 2,384,783 in 2017.

The population in Riverside County is projected to be 3,183,000 in 2040. This represents an increase in population in Riverside County of 1,449,306, or an 83.6% increase between 2010 and 2040.

Table 4.13-4
Population Forecasts

	2010 Count[1]	2018 Estimate[2]	2020 Forecast[2]	2040 Forecast[2]	Increase 2010-2040	Percent Increase, 2010-2035
Riverside County	1,733,694	2,415,955	2,649,781	3,103,100	1,449,306	83.6%

Sources: [1] 2010 US Census
[2] SCAG 2016

As shown in **Table 4.13-5, *Household Forecasts***, the number of households in Riverside County was estimated to be 525,018 in 2010 and is estimated to have increased to 840,904 in 2018. The number of households in Riverside County is projected to be 1,054,300 in 2040. This represents an increase in the number of households in in Riverside County of 529,282 (an increase of more than 100%) between 2010 and 2040.

Table 4.13-5
Household Forecasts

	2010 Count[1]	2018 Estimate[2]	2040 Forecast[2]	Increase, 2010-2040	Percent Increase, 2010-2025
Riverside County	525,018	840,904	1,054,300	529,282	100.8%

Sources:
[1] 2010 US Census
[3] SCAG 2016

4.13.2.2 Land Use Setting

The houses proposed for development will be located in the Residential Project site only. No houses will be developed in the Off-site Project components. However, the land use designations for the Off-site Project components are included below for completeness.

Residential Project Site

The General Plan Land Use designation for the Residential Project site is Community Development and the zoning is Medium Density Residential (MDR). The General Plan EIR anticipated that the Project site would be developed for residential purposes. The Residential Project site is surrounded to the north, south and the east by properties with a General Plan designation of Community Development that are also zoned Medium Density Residential. The surrounding land to the west is also designated Community Development but is zoned Estate Density Residential (EDR). The surrounding properties to the north, south, east and west are designated Community Development in the General Plan and are zoned for residential development, similar in scale and intensity to the proposed Residential Project. **Table 4.13-6, *Surrounding Land Uses***, lists the different uses that are located immediately adjacent to the proposed Project site.

Table 4.13-6
Surrounding Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	Community Development (CD)	Medium Density Residential (MDR)	Vacant
North	Community Development	Medium Density Residential (MDR)	Vacant
South	Community Development	Medium Density Residential (MDR)	Vacant
East	Community Development	Medium Density Residential (MDR)	Vacant and agricultural
West	Community Development	Estate Density Residential (EDR)	Vacant and residential

Sources: Map My County (**Appendix A**) and Google Maps www.google.com/maps

The Residential Project site lies one mile east of the eastern boundary of the City of Menifee. The area surrounding the Residential Project site is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads.

Off-Site Project Components

The site of the proposed off-site trapezoidal earthen drainage channel lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

4.13.3 Thresholds of Significance

As discussed in Section 4.13.1, the Project impacts to one (1) criterion pertaining to population and housing will be analyzed. According to he IS, the Project would have a significant impact if it would:

35. Housing.

f. 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)?

The question posed in the IS is included for each topical section to guide the impact analysis and the above significance criterion represents a summary of the thresholds raised in the IS. The potential changes in population and housing in the environment are addressed in response to the above threshold in the following analysis.

4.13.4 Potential Impacts

THRESHOLD 35.f: 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)?

Less Than Significant Impact

The Project proposes 574 single-family residences that would have a build-out population of approximately 1,671. The existing General Plan Land Use Designation density for the site (MDR 2-5 dwelling units/acre) would allow construction of 554 dwelling units at the density mid-range. Development of the property in accordance with this General Plan Land Use Designation density would generate a build out population of approximately1,613 people. The proposed Project is expected to result in 20 more residences and approximately 58 more residents at the site than the mid-range of the General Plan Land Use Designation of MDR. Based on this number, the Project site represents 1% percent (0.01) of the *HVWAP*'s total acreage (158.18 ÷ 13,654 = 0.01) and the 58-additional people resulting from the Project represents a 0.051% (0.00051) increase in population within that 1% of the *HVWAP* area. It should be noted that the density range does go up to 5 dwelling units per acre. At that maximum density, the Project site could yield 790 homes with a population of approximately 2,299 people. The Project is consistent with the range of Medium Density Residential. Therefore, the Project is not proposing a significant intensification of population and housing over the current General Plan projections. Any impacts would be less than significant.

New infrastructure will be built as part of this Project which will contribute to extending improved services into the area. Suburbanization of the Project site could potentially influence the timing of development of adjacent properties by providing or extending roadways, water and sewer service, and other utility services (infrastructure) to the immediate area. This could eliminate potential constraints for future development in this area of the County. New streets within the Project site are proposed that will connect to roadways that will be improved (Holland Road, Eucalyptus Road, Craig Avenue and Leon Road). The roadway improvements are expected to be incremental and should beneficially impact the overall traffic conditions in the area anticipated from the Project; but this itself is an inducement to growth, i.e., enhanced access to the Project area. These improvements will have an indirect impact to population growth by extending and/or increasing capacity of the existing roadways, thus eliminating one of the constraints to growth in the area.

Currently, potable water in the vicinity of the Project site is provided by private wells on individual properties, by Eastern Municipal Water District (EMWD). Water service exists adjacent to the Project site; however, additional water distribution facilities will be necessary to serve the proposed development.

Existing EMWD sewer facilities do not extend to proposed Project site. The lack of sewer service within this area currently limits development. Therefore, extension of new sewer service facilities to the Project area is required. The addition of sewer lines and service into the Project area are sized to meet the growth projections of EMWD. This infrastructure improvement eliminates existing sewer constraints and will make it much easier to propose residential development at higher densities (anticipated under the General Plan) within the Project vicinity. Any increase in density or change in land use on nearby parcels would require a separate environmental review. However, these improvements contribute to eliminating constraints to development, thus making the Project growth inducing relative to the existing rural environment.

The proposed infrastructure improvements have the potential to facilitate development of undeveloped parcels in the immediate vicinity of the site, thus the Project may indirectly induce population growth.

The Project will install off-site flood control facilities, including MDP/ADP improvements, which will remove drainage limitations that currently exist for property surrounding the Project site.

The MDP/ADP improvements to be constructed by the Project have been sized to meet regional drainage demands. The installation of the MDP/ADP improvements by the Project will remove drainage limitations that currently exist for properties in the Project area and will result in an increase in population that is anticipated in the General Plan.

Based on this information, direct impacts from the homes developed by the Project will be less than significant.

The indirect effects from the Project infrastructure extensions and improvements (roadways, sewer and drainage), while anticipated under the General Plan, will be less than significant.

No businesses are proposed; therefore, there will be no direct or indirect impact.

4.13.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

There are no applicable standard conditions for the Project as it pertains to population and housing. Please reference Chapter 4.15, Transportation and Chapter 4.17, Utilities and Service Systems as it pertains to standard conditions for any indirect effects from the Project.

Mitigation Measure(s)

No mitigation measures are required for direct or indirect impacts to population and housing resources. Please reference Chapter 4.15, Transportation/ and Chapter 4.17, Utilities and Service Systems as it pertains to mitigation measures for any indirect effects from the Project.

4.13.6 Cumulative Impacts

As defined in the *CEQA Guidelines,* cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for population and housing. The cumulative study area used to assess potential cumulative population and housing impacts includes the County of Riverside, which is the regional context for the Project.

The IS determined that the Project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere, or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, create a

demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income, displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, or affect a County Redevelopment Project Area. No impacts will occur. The IS also determined that the Project would have a less than significant impacts when it comes to cumulatively exceed official regional or local population projections. Project increases to population and households are incremental, and due to their small percentage in relation to the City and County, they are not considered substantial increases to population and households.

As discussed in the analysis above, the residential population growth from the Project is not cumulatively considerable and is not a significant adverse population or housing impact. As indicated in the preceding analysis, the proposed Project may have a growth inducing impact on the community due to the Project's location, and the new infrastructure will that be built as part of this Project. Said infrastructure will contribute to extending improved services into the area. These improvements are what are envisioned under the long-range planning documents of the County, Riverside County Flood Control and Water Conservation District, and Eastern Municipal Water District. Therefore, these are not considered a significant cumulative impact.

4.13.7 Unavoidable Significant Adverse Impacts

The proposed Project would not cumulatively exceed official regional or local population projections; however, it would not induce directly substantial population growth in an area. No significant adverse impacts are anticipated.

Indirect impacts from the installation of new infrastructure to serve the Project and the region, while anticipated under the General Plan, will be less than significant.

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4.14 RECREATION

4.14.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of recreation from implementation of the Project. The Recreation Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

41. Parks and Recreation.
- a. Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
- b. Would the Project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- c. Is the Project located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?

42. Recreational Trails. Would the Project include recreational trails or require the construction or expansion of recreational trails which might have an adverse physical effect on the environment?

Based on the analysis in the IS it was determined that the above issue areas 41.a, b, and c, and 42, related to recreation, **would** be further analyzed in the DEIR.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The text in Threshold 42 was revised slightly from what is stated above to:

42. Recreational Trails. Would the Project include the construction or expansion of a trail system?

The revision to this language is reflected in the analysis below.

Standard condition SC-PS-1 (development impact fees) has been carried over to this DEIR from the IS.

There were no mitigation measures presented in the IS to be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- Ordinance No. 460 “An Ordinance of the County of Riverside Regulating the Division of Land” (Section 10.35 Park and Recreation Fees and Dedications) http://www.rivcocob.org/wp-content/uploads/2009/10/Final-Ordinance-No.-460.pdf
- Ordinance No. 659 (As Amended Through 659.13) “An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program”

https://www.rivcocob.org/wp-content/uploads/2009/10/659.13.pdf

- *Riverside County General Plan (Open Space & Conservation Element* and *Land Use Element)*
  https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
  General Plan Environmental Impact Report (GPEIR), (*Chapter 4.14 – Recreation and Appendix F, Population and Employment Forecast)*
  https://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html
- Google Maps
  www.google.com/maps
- California Government Code § 66477
  https://codes.findlaw.com/ca/government-code/gov-sect-66477.html
- The *Harvest Valley/Winchester Area Plan (HVWAP)*
  https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633
- The *Sun City/Menifee Valley Area Plan (SCMVAP)*
  https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- Western Riverside County Non-Motorized Transportation Plan
  http://ca-wrcog.civicplus.com/DocumentCenter/View/194/Non-Motorized-Transportation-Plan-PDF?bidId=
- *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis Report County of Riverside,* prepared by Urban Crossroads, June 5, 2018 (*TIA,* **Appendix K**)

The Residential Project site is approximately 158.18 acres and consists of a generally square-shaped tract of agricultural land bounded by Holland Road on the north, Eucalyptus Road on the east, Craig Avenue on the south and Leon Road on the west. The Project proposes to subdivide the Residential Project site into 574 single-family residential lots and recreational facilities (CZ 1800007, PPT180024, and TTM 37439), and establish all necessary roadway/sidewalk, drainage, sewer improvements (Off-site Project components). The density on the Residential Project site is 3.6 dwelling units per acre, including the following recreational amenities:

8.96-acre community park (open to the public) improved to include the following:

- 1 baseball field (lighted);
- 2 soccer fields (lighted);
- ½-court basketball;
- Tot lot;
- Open-turf play area;
- Picnic area with shelter;
- Seating area;
- Restroom building; and
- Parking.

There are also numerous paseos throughout the Canterwood community and 7 paseos/mini parks (Lots 576, 579, 580, 582, 591, 594, and 604).

Trail and Walkway system (13,264 linear feet (LF)) to provide public access to the Community Park and open space in the Residential Project site:

- 10'-wide Regional Trail along Holland and Eucalyptus Roads in the Residential Project site
  - o separated from the roadways by a 4' buffer and a tubular steel fence
  - o separated from adjacent property by a 2' buffer and a 48" 3-rail vinyl fence
  - o improved with 6" decomposed granite base (unpaved)
- 16'-wide fenced hiking trail/maintenance road along the drainage channel
  - o adjacent to lots 577, 581, and 588
- Sidewalks (56,417 LF)
  - o along all streets in the Residential Project site
  - o in all paseos in the Residential Project site

Bicycle Lanes
- Class II
  - within the Craig Avenue and Leon Road frontages in the Residential Project site
  - improved with pavement striping and signage
- Class III
  - in the Residential Project site
  - un-striped but provide for shared access with motor vehicles

Open Space
- 9 drainage basins within the Residential Project site

Reference **Figure 4.14-1**, ***Assessor's Parcel Map***; **Figure 4.14-2, *TTM 37439***, and **Figure 4.14-3, *Regional Trail: Urban/Suburban***.

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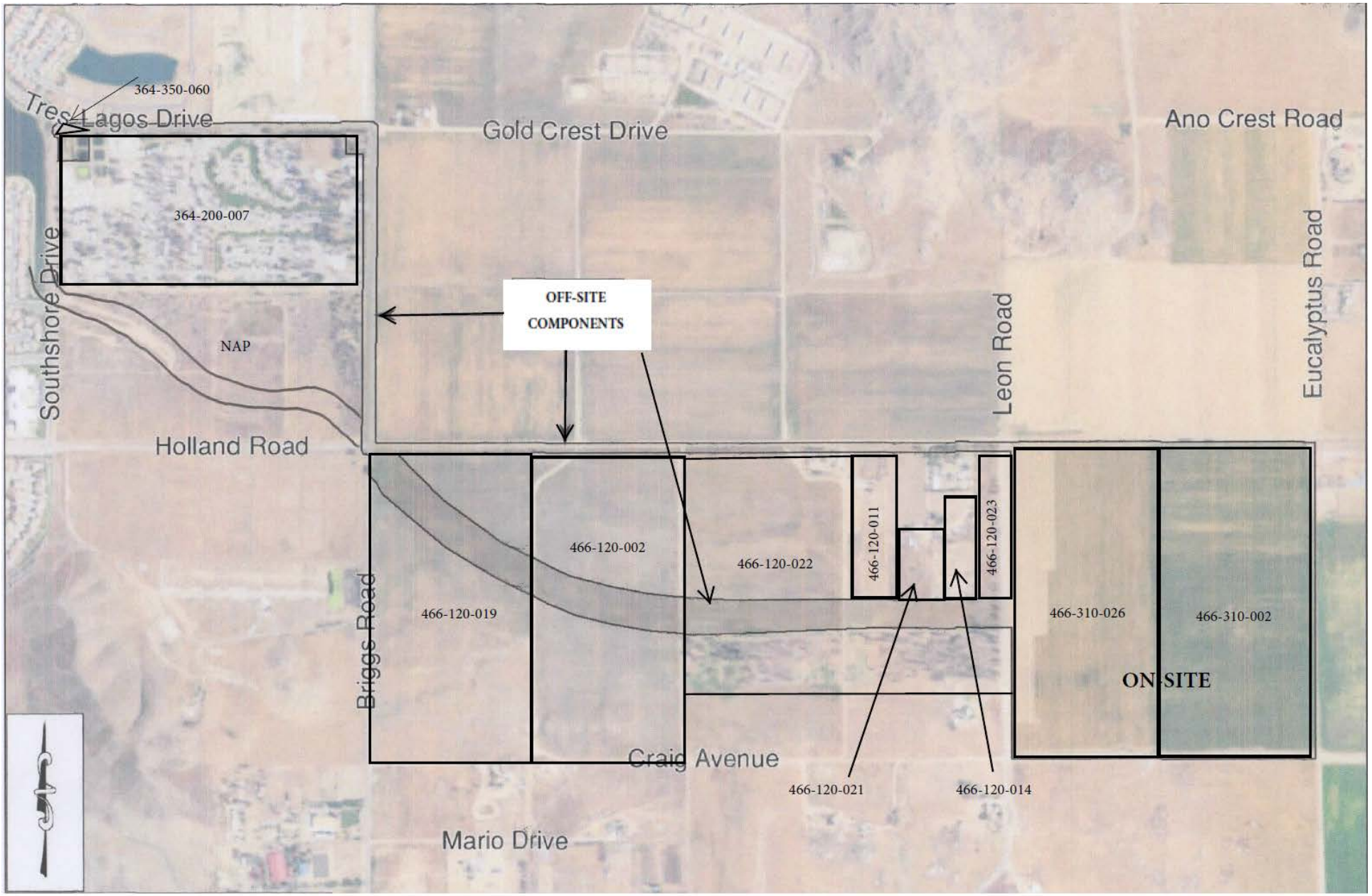
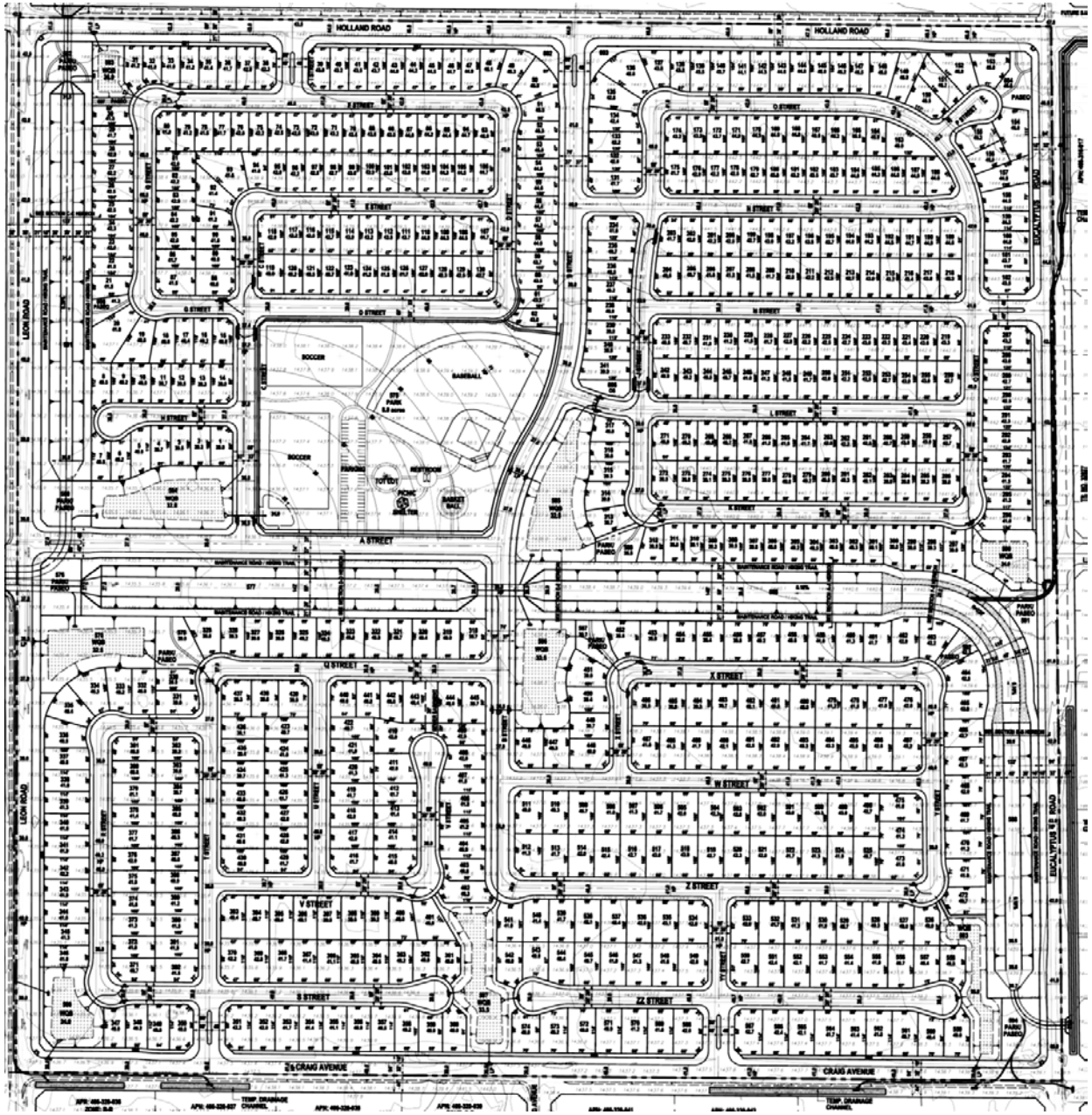
FIGURE 4.14-1
ASSESSOR'S PARCEL MAP



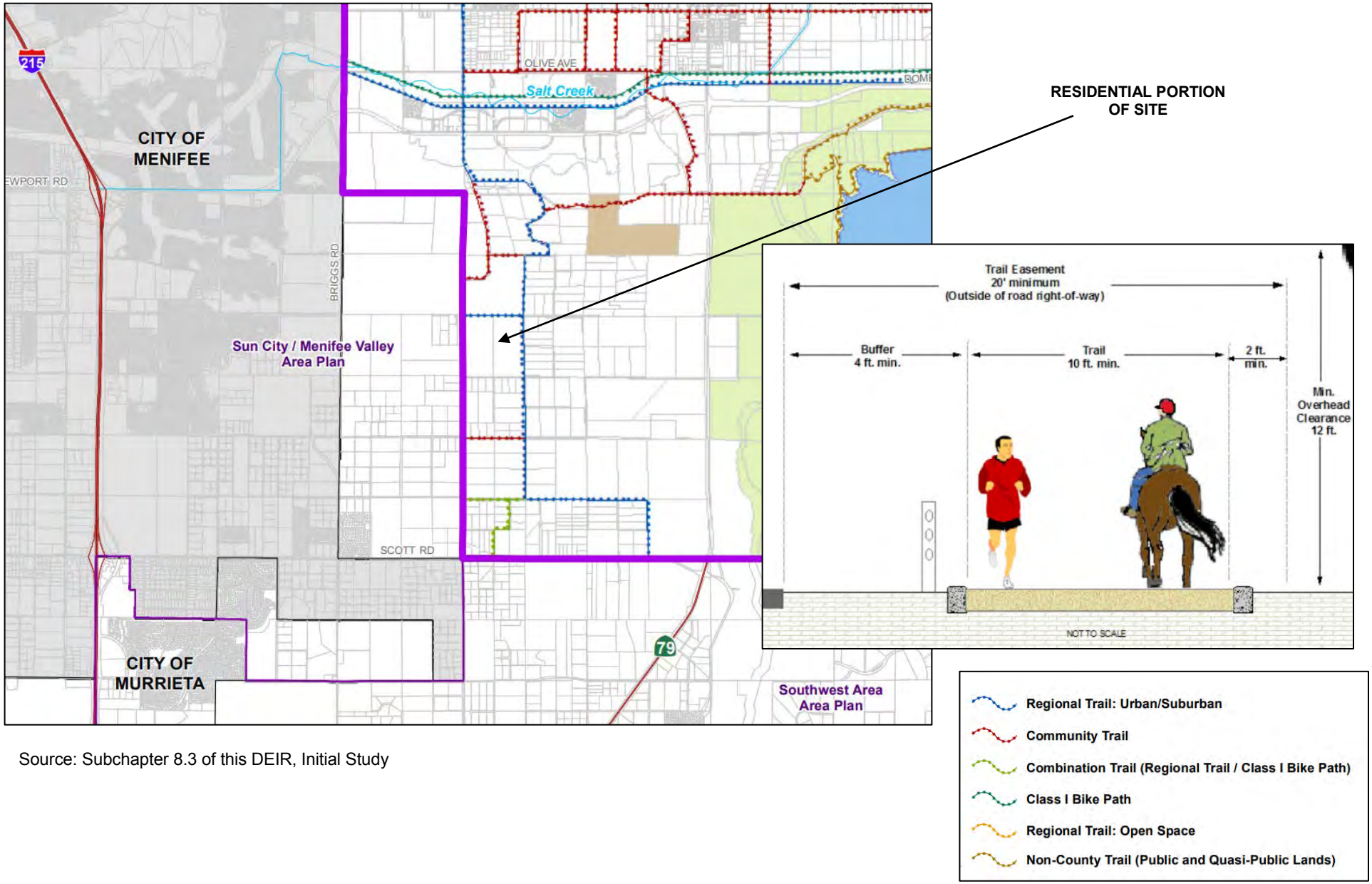
Source: Initial Study (**Appendix N**)

FIGURE 4.14-2
TTM 37439



Source: Initial Study (**Appendix N**)

FIGURE 4.14-3
REGIONAL TRAIL: URBAN/SUBURBAN



Source: Subchapter 8.3 of this DEIR, Initial Study

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Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding recreation were received in response to theNOP/IS or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 41.a., 41.b, 41.c, and 42 are the focus of the following evaluation of recreation.

4.14.2 Environmental Setting

Parks and other recreational facilities provide a multitude of benefits to the community, such as open space, conservation of natural and significant resources, buffers between land uses, preservation of scenic views, trails, and recreational uses.

The following parks are defined in the *GPEIR* (pp. 5.15-1 and 5.15-2):

- **Mini-Parks**: May be as large as one acre, although they typically occupy infill parcels. These parks are used to address limited recreation needs and generally offer targeted amenities.
- **Neighborhood Parks**: The basic unit of the City's park system. Neighborhood parks range in size from 1 to 10 acres and generally accommodate informal activities and passive recreation.
- **Community Parks**: These parks serve a broader purpose than Neighborhood parks. Community parks meet the City's recreation needs for more formal and highly programmed activities. Amenities may include lighted sports fields, gymnasiums, art venues, and community meeting facilities.
- **Regional Parks**: These parks serve an area larger than the community in which they are located and are usually greater than 40 acres in size. Amenities may be similar to those of Community parks, but on a larger scale that would attract users from a wider area.
- **Special Use Properties/Facilities**: These parks provide more specific park and recreation facilities such as tennis courts or swimming pools.

County Ordinance No. 460 (discussed in more detail below) requires new developments to contribute either 5 acres of parkland per 1,000-person increase in population or pay park fees. Constructed parks are required to be built to County standards if the park is to substitute for paying park fees. Passive open space is not counted toward park land credit. The Project is proposing an 8.96-acre Community Park and 7 mini-park/paseos all of which will be accessible to the public. Reference **Figure 4.14-2**, which depicts the location and size of the Community Park within the Residential Project site.

Project residents will also have access to County parks operated by the Valley-Wide Recreation and Park District and parks located in the City of Menifee (City). These parks offer an array of facilities, including: playgrounds, sports courts, barbeque and picnic facilities.

Riverside County Valley-Wide Recreation and Park District

The Valley-Wide Recreation and Park District operates 79 parks in the area surrounding the Residential Project site. 20 parks are located in the City and 59 parks are located outside the City limits in the County. Valley-Wide also operates two Aquatic Centers, one of which is located at 1801 Angler Avenue, Hemet, near the Diamond Valley Lake, a 10-mile drive from the

Residential Project site. This aquatic center offers a heated 25-yard outdoor pool with water slide, zero depth entry with water fountain sprayers, and activity toys for small children.

Kabian County Park next to the northwest City boundary, offers about 639 acres (one square mile) of open space.

City of Menifee

The City provides 12 parks totaling 62.04 acres. The closest park in the vicinity of the Residential Project site is Mira Park, located in a higher density single-family housing development.

Mira Park is located at Mira Street and Wickerd Road in the City, about 1.5 miles west of the southwest corner of the Residential Project site. The driving distance on paved roads is about 2 miles. Mira Park is a 5-acre park with one ball field, two basketball courts, one play area and one picnic area.

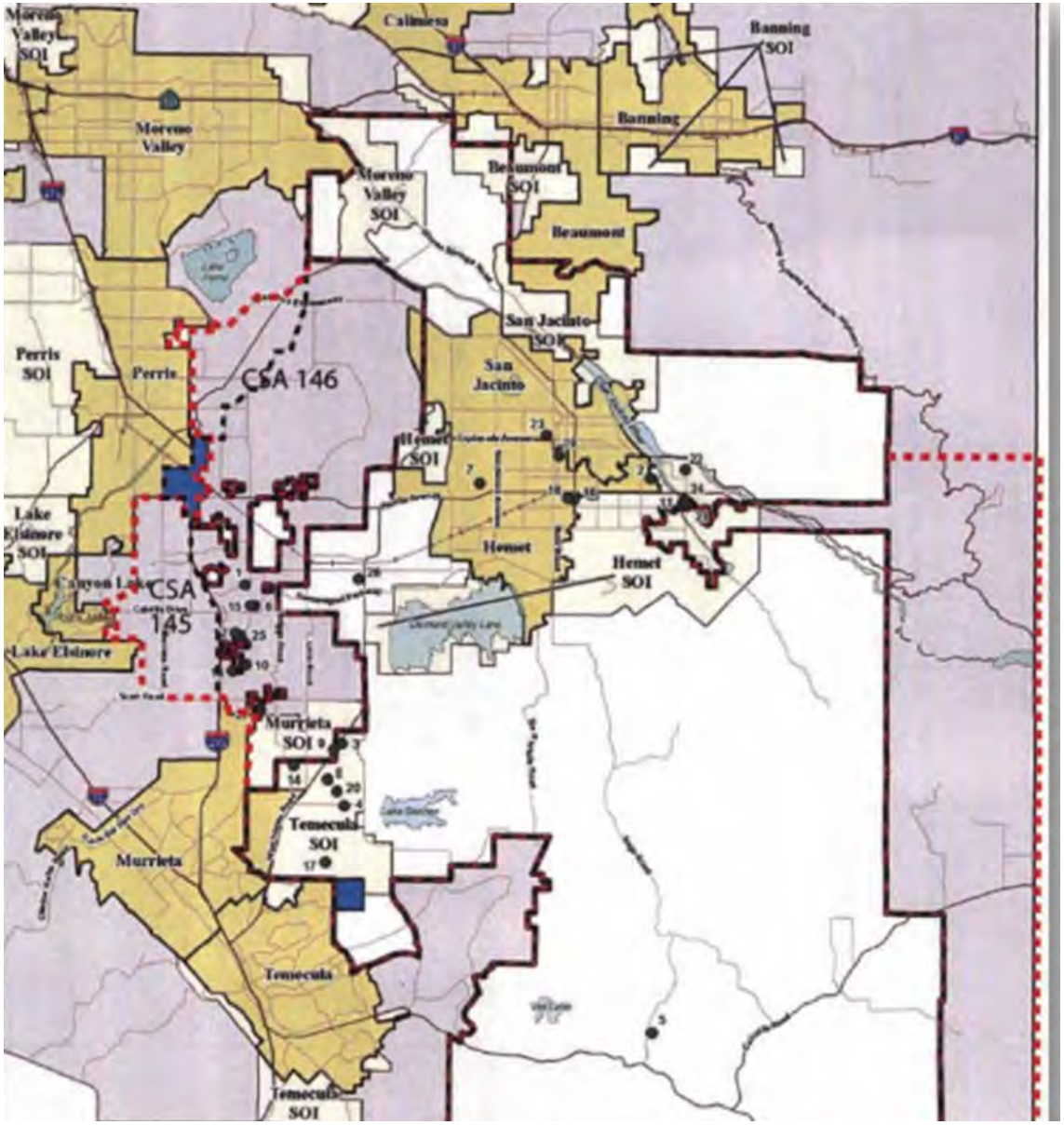
Aldergate Park is located about 2.5 miles northwest of the Residential Project site at Menifee Road and Aldergate Drive in the City and offers an off-leash dog park.

The closest Community Center to the Residential Project site is the 25-acre Menifee Community Center/Wheatfield Park located at the southwest corner of Menifee and La Piedra Roads, about 2.5 miles west of the northwest corner of the Residential Project site.

Menifee Community Center/Wheatfield Park provides a 4,000 square foot Community Center, a 10,000 square foot gymnasium, 6 baseball fields (2 of which are lighted), one basketball court, two tennis courts and one volleyball court, horseshoe pits, a picnic area, play areas and restrooms.

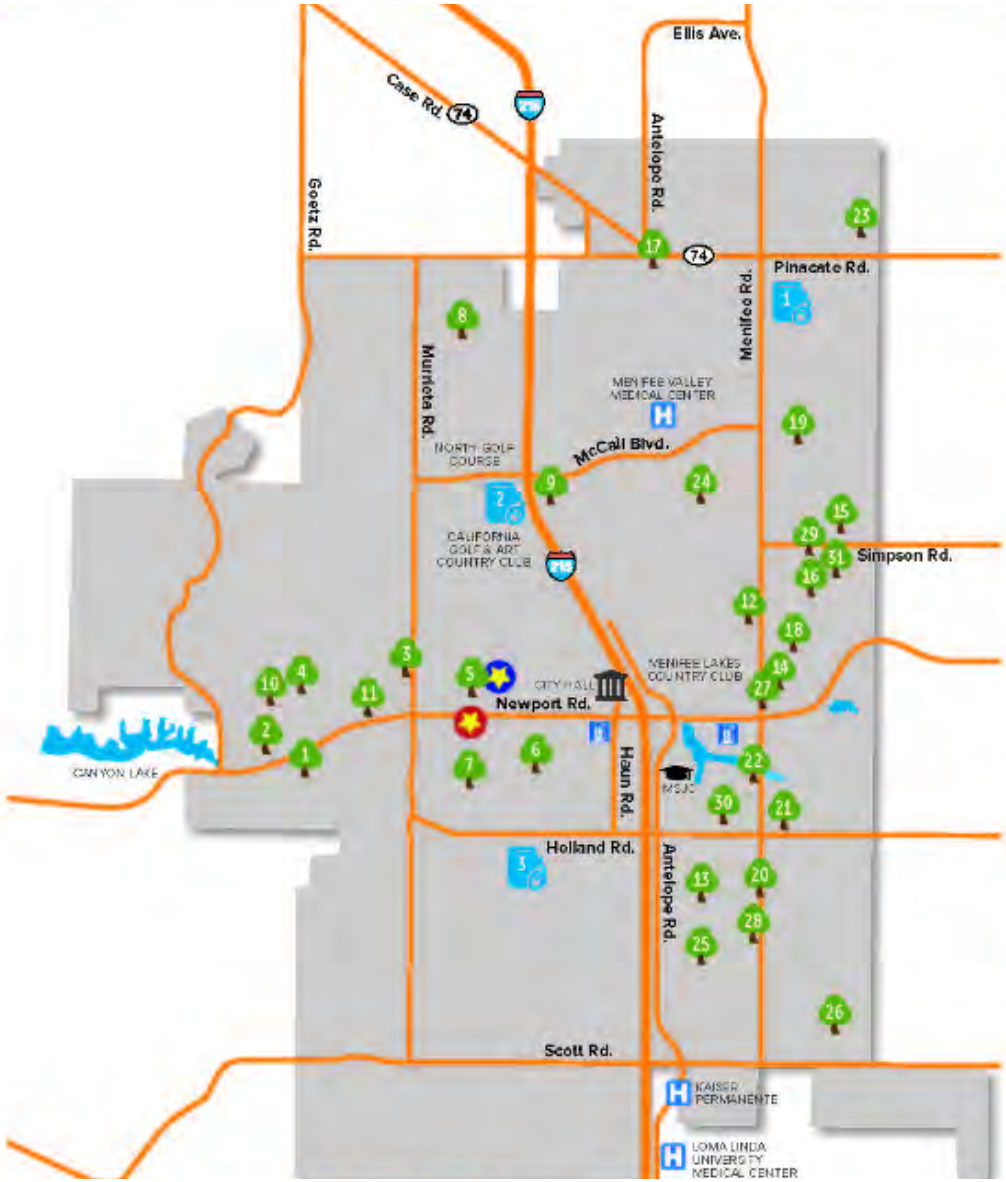
Figure 4.14-4, *Valley-Wide Recreation and Parks District Boundaries and Park Locations* shows the parks in the Valley-Wide Recreation and Parks District adjacent to the Project site. **Figure 4.14-5, *City-Owned Parks, Recreation Centers, and Libraries*** shows the parks within the City limits to the west of the Project site. Reference **Table 4.14-1**, ***City-Owned Park Sites*** and **Table 4.14-2, *Valley-Wide Recreation and Park District-Owned Park Sites***, which list the parks shown on **Figure 4.14-4** and **Figure 4.14-5**, together with their size and address.

FIGURE 4.14-4
VALLEY-WIDE RECREATION AND PARKS DISTRICT BOUNDARIES AND PARK LOCATIONS



Source: Valley-Wide Recreation & Park District https://www.gorecreation.org/files/ab5e857a7/Master+Plan+2010.pdf

FIGURE 4.14-5
CITY-OWNED PARKS, RECREATION CENTERS, AND LIBRARIES



Source: City of Menifee https://www.cityofmenifee.us/285/Parks

Table 4.14-1
City-Owned Park Sites

Park Name	Address	Acreage
Audie Murphy Ranch Sports Park	30376 Lone Pine Drive	11.29
E.L. Peterson Park	29621 Park City Avenue	4.81
Kay Ceniceros Senior Center	29995 Evans Road	1.45
La Ladera Park	29629 La Ladera Road	8.30
Lazy Creek Park and Recreation Center	26480 Lazy Creek Road	3.40
Lyle Marsh Park	27050 School Park Drive	6.07
Nova Park	25444 Nova Lane	3.35
Rancho Ramona Park	28050 Encanto Drive	1.87
Spirit Park	25507 Normandy Road	8.78
Mayfield Park	26410 Rim Creek Path – Coming Soon	2.54
Hidden Hills Park	Coming Soon	5.18
Silver Star Park	Coming Soon	3.42
Creek View Park	Coming Soon	2.56
Central Park	Coming Soon	5.0

Source: Existing Public Park Regulations & Facilities https://www.cityofmenifee.us/285/Parks

Table 4.14-2
Valley-Wide Recreation and Park District-Owned Park Sites

Park Name	Address	Acreage
Aldergate Park	Menifee Rd and Aldergate Drive	8.10
Autumn Breeze Park	Autumn Lane and Corderro Lane	1.48
Desert Green Park	Painted Desert Drive and Desert Terrace Drive	0.45
Discovery Park	Heritage Lake Drive and Calm Horizon Drive	7.34
El Dorado Park	Trailhead Drive and Lindenberger Road	3.12
El Dorado Pocket Park	Rustic Glen Street and Longleaf St.	0.37
Eller Park	Highway 74 and Antelope Road	5.13
Grand Vista Park (Richmond Park)	Grand Vista Ave. and Promenade Road	0.30
Heritage Park	Heritage Lake Drive and McCall Blvd.	4.82
Hidden Meadows Park	Highland Curt	2.39
La Paloma Park	Menifee Road and Bayport Lane	4.36
Mahogany Creek Park	Garden Grove Drive and Park Trail Way	3.36
Marion V. Ashley Park and Community Center	25625 Briggs Road	11.36
McCall Canyon Park	Brantley Court and Crestwood St.	3.03
Wheatfield Park, Menifee Gym and Community Center	Menifee Road and La Piedra Lane	26.87
Menifee South Tot Lot	Feather Creek and Eickhoff Drive	1.11
Mira Park	Mira St. and Wickerd Road	5.66
Pepita Square Park	Camino Pepita Drive and Camino Cristal	0.54
Rolling Hills Park	Pacific Bluff St.	2.46
Sunrise Park	Simpson Road and Lindenberger Road	11.19
Lago Vista	Holland Road and Menifee Road	15.92

Source: Existing Public Park Regulations & Facilities https://www.cityofmenifee.us/285/Parks

Demand in the County for golf courses is also high due to the sizable senior population. Four 18-hole golf courses are located in close proximity to the Project site. Two are located in Sun City (one is executive style) and two are in the Menifee Lakes area of the City.

The Residential Project site is also located within1.25-miles from the 80-acre Wilderness Lakes RV Resort, located at 30605 Briggs Road, Menifee, which offers 523 camp sites with water, electricity and sewer hookups and a stocked lake for fishing.

Trails

Types of trails planned by the County include:

- Community (regional) trails;
- Historic trails;
- Non-County Public Lands Trails;
- Class 1 bikeways a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized;
- Class II bikeways for preferential use by bicycles, provided within paved roadway areas; and
- Class III bikeways to provide continuity within the bikeway system usually by connecting discontiguous segments of Class 1 and Class 2 bikeways.

Pedestrian and Bicycle Facilities

The Riverside County Trails and Bikeway System is shown on **Figure 4.14-6, *Riverside County Trails and Bikeway System***. Future planned regional trails are proposed along Holland Road and Eucalyptus Road. A community trail is proposed along Garbani Road to the west with a combination trail (Regional/Class I bike path) to the east. The Bikeways and Community Pedestrian Network for the City of Menifee are shown on **Figure 4.14-7, *City of Menifee Bikeway and Community Pedestrian Network***. Field observations conducted in January 2018 indicate nominal pedestrian and bicycle activity within the Project area. Existing pedestrian facilities currently exist along portions of Scott Road, Holland Road, Menifee Road, Antelope Road and Zeiders Road. The existing pedestrian facilities within the Project area are shown on **Figure 4.14-8, *Existing Pedestrian Facilities***.

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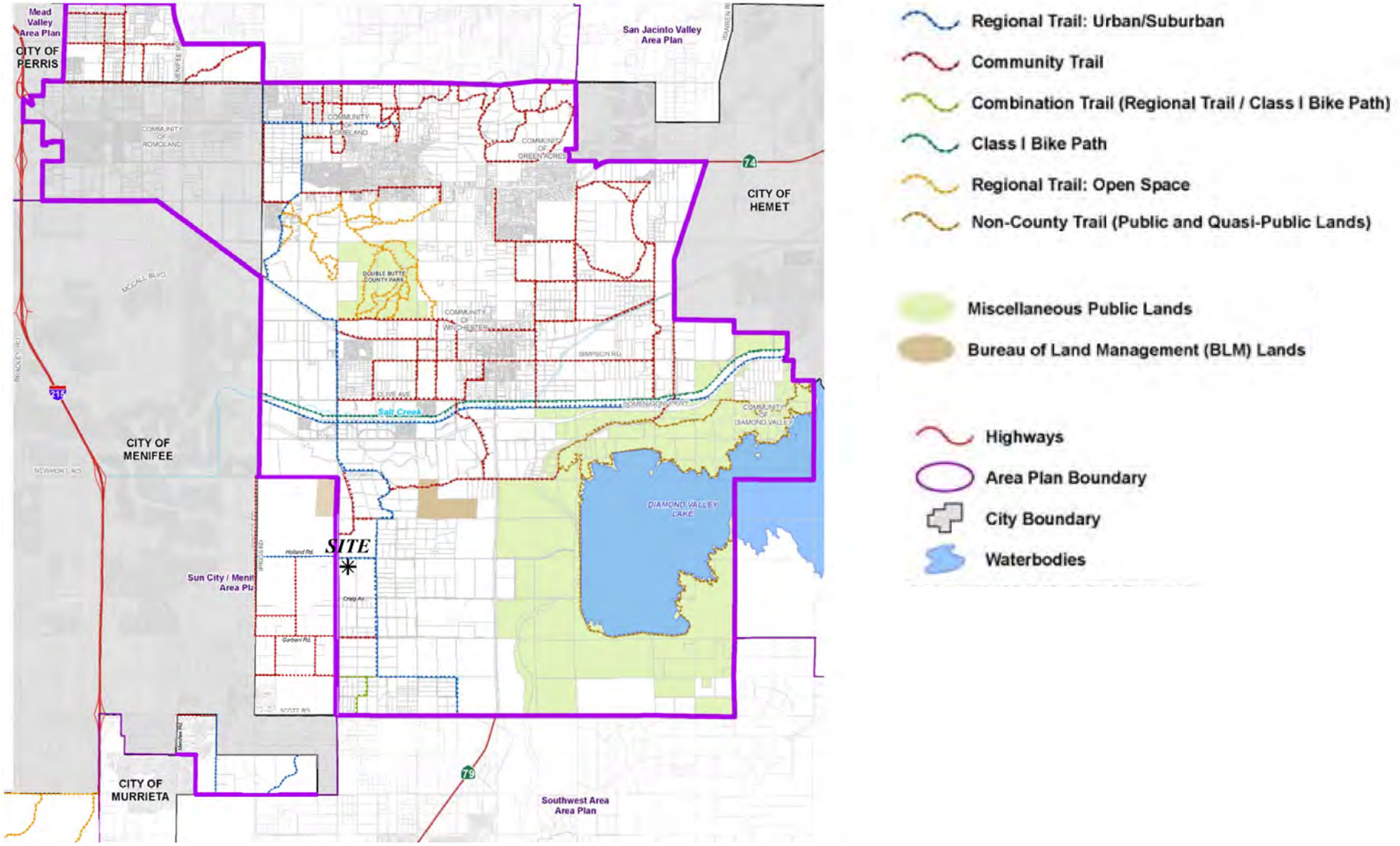
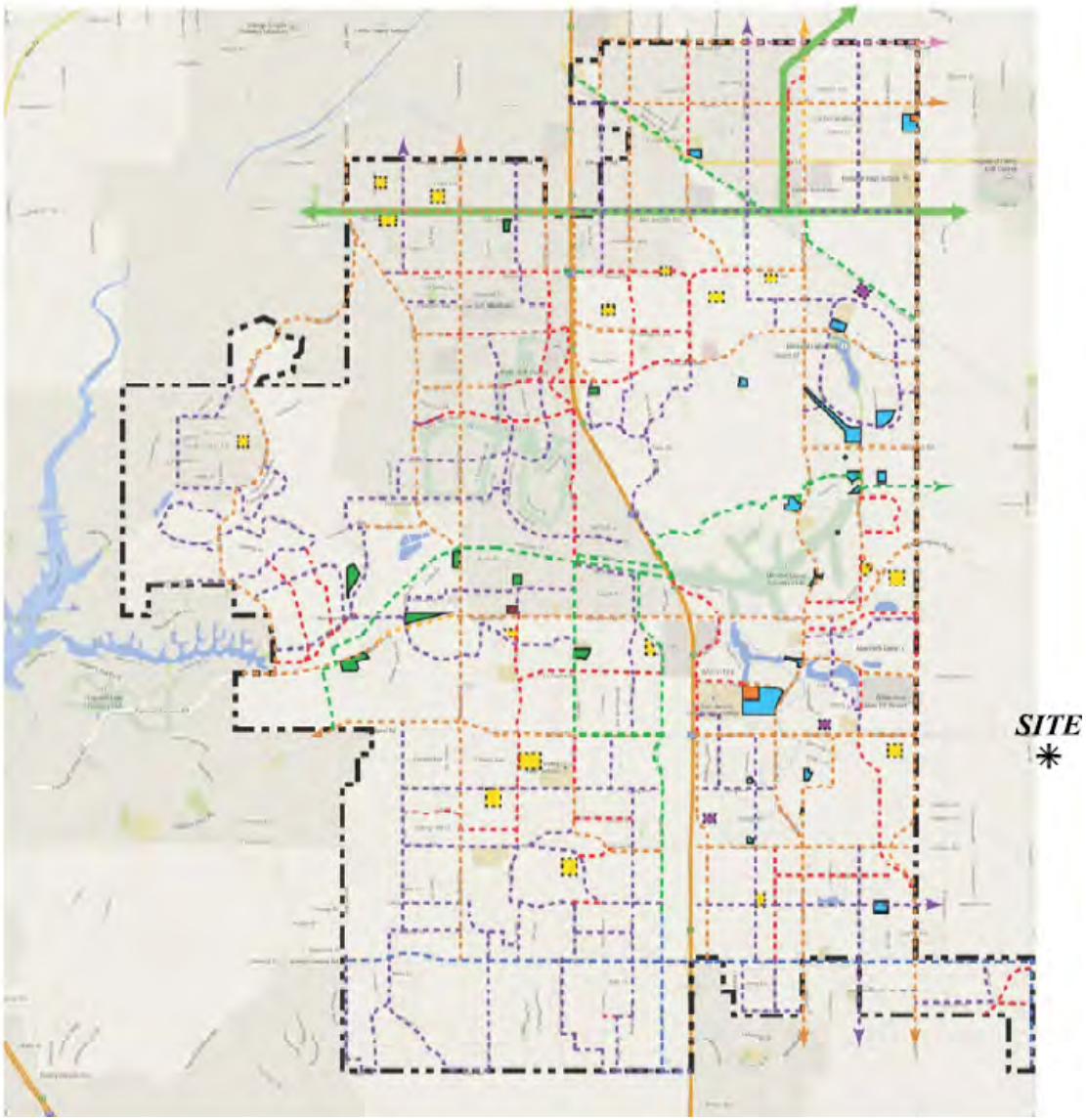
FIGURE 4.14-6
RIVERSIDE COUNTY TRAILS AND BIKEWAY SYSTEM



Source: TIA (**Appendix K**)

FIGURE 4.14-7
CITY OF MENIFEE BIKEWAY AND COMMUNITY PEDESTRIAN NETWORK



LEGEND

TRAILS

- Regional Trail - Class I (Includes C4 Subregional Route - Off-Road Bike Trail Class I, 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

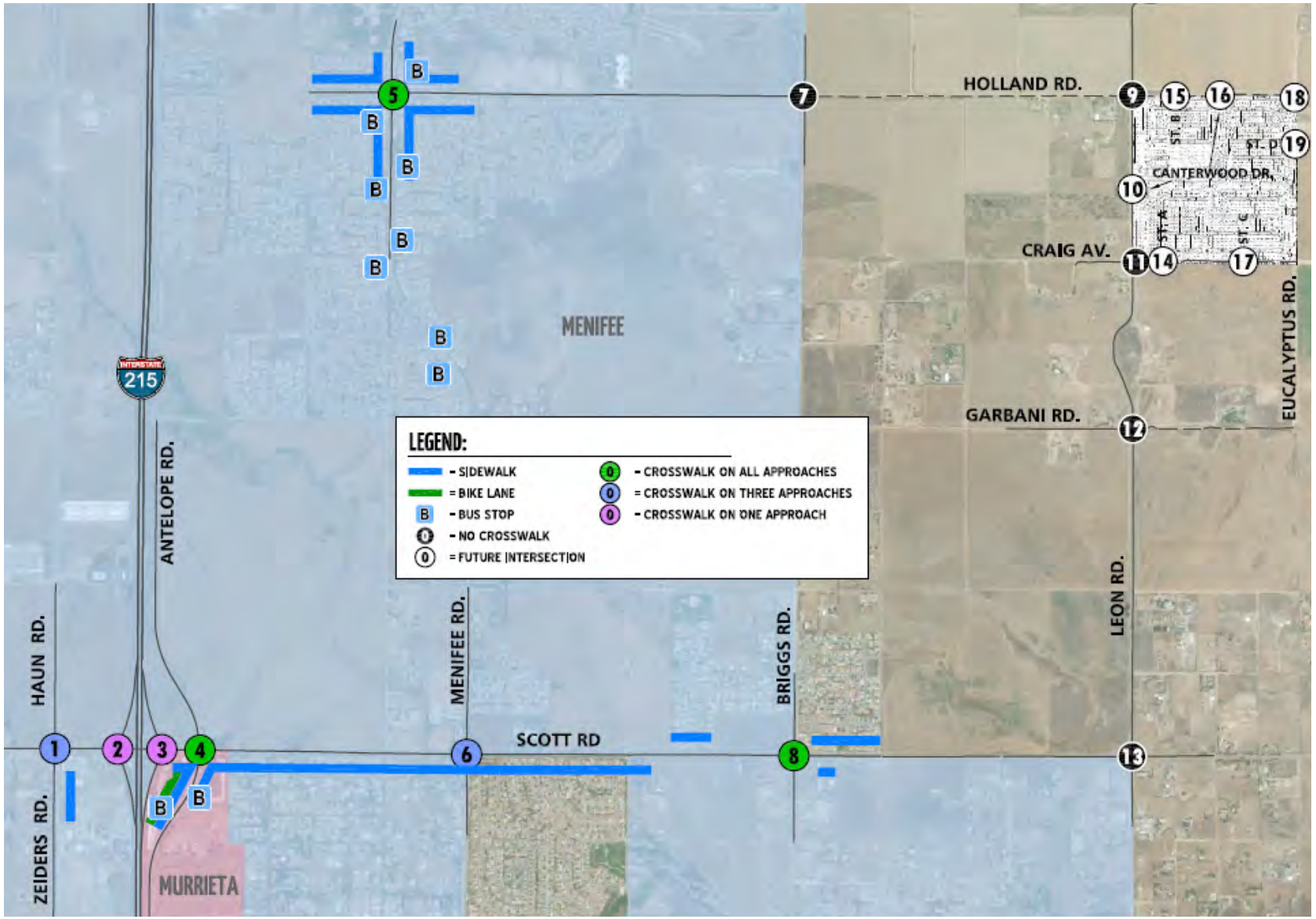
- Public Utility Corridor

PARKS & FACILITIES

- City Parks
- City Facilities
- City Parks in Progress
- VWRPD Parks
- VWRPD Facilities
- VWRPD Parks in Progress

Source: TIA (**Appendix K**)

FIGURE 4.14-8
EXISTING PEDESTRIAN FACILITIES



Source: TIA (**Appendix K**)

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The Harvest Valley/Winchester Area Plan identifies a Class I bike route along Salt Creek about 1.75 miles north of the Residential Project site. The Salt Creek bike route is planned to eventually connect Winchester with Lake Elsinore. The Salt Creek bike route is a "multi-purpose trail". The HVWAP defines the trail as:

> "*Serv(ing) both as a means of connecting the unique communities and activity centers throughout the County of Riverside and as an effective alternative mode of transportation. In addition to transportation, the trail system also serves as a community amenity by providing recreation and leisure opportunities as well as separators or edges between communities."*

Sub-regional non-motorized routes near the Project site depicted on the WRCOG Non-Motorized Transportation Plan are as follows:

- Route 15 (Salt Creek/Domenigoni): Crosses the City east–west, partly along Salt Creek. Extends east to Hemet, southwest to Wildomar.
- Route 19 (Bundy/Scott): Crosses the City east–west on Bundy Canyon Road and Scott Road. Extends west to Wildomar and east of Menifee.
- Route 23 (I-215 South, Menifee, Murrieta): North–South mainly on Haun Road and Bradley Road. Extends south to Murrieta.
- Route 24 (Case-Leon): Runs northwest–southeast alongside Burlington Northern Santa Fe (BNSF) railroad track; extends north to Perris, south to Murrieta. (WRCOG 2010)

Route 15 and parts of Route 24 would be off-road, and the remaining subregional trails would be on-road.

These routes are shown on **Figure 4.14-9, *WRCOG Non-Motorized Transportation Network***.

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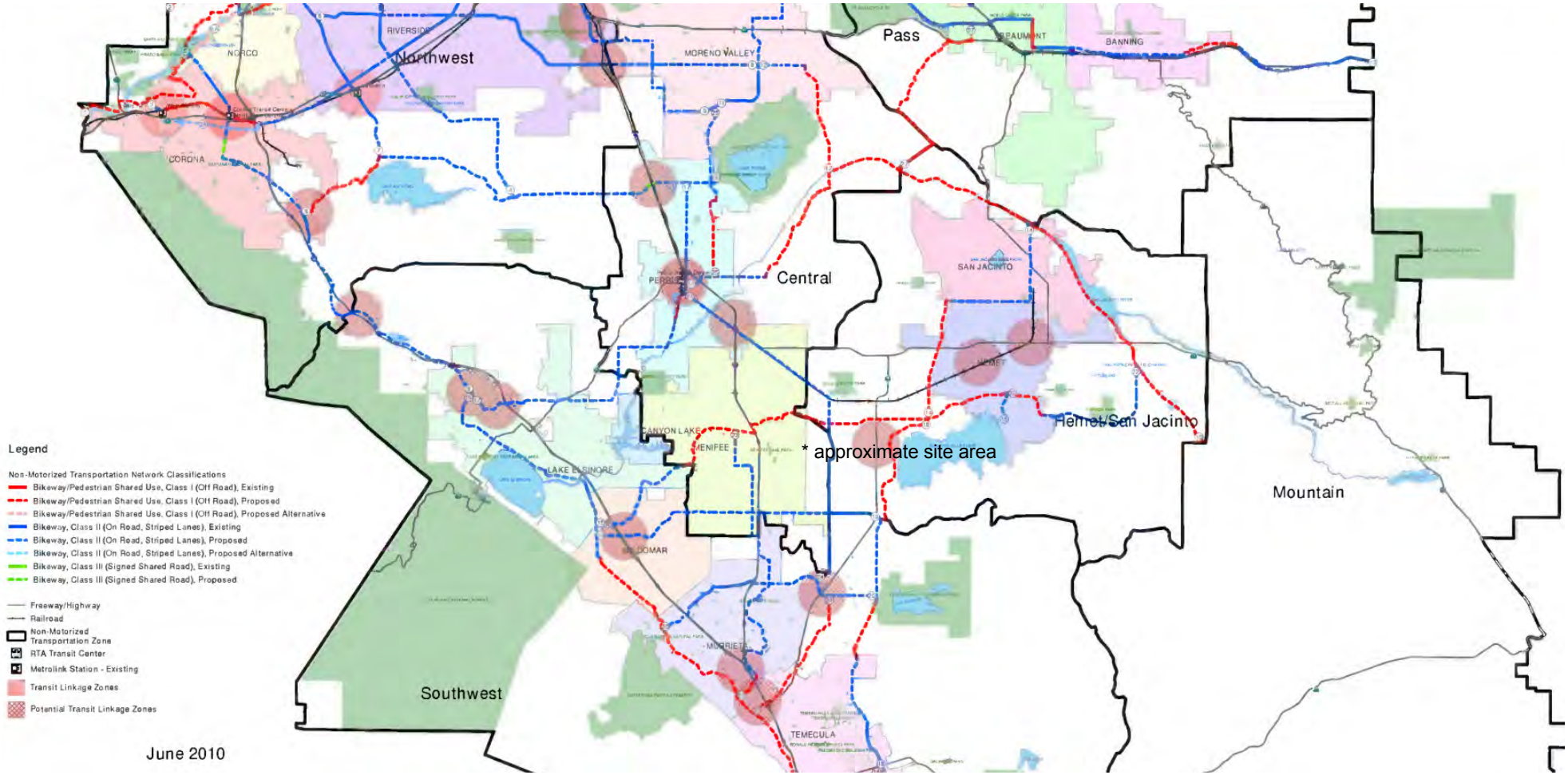
FIGURE 4.14-9
WRCOG NON-MOTORIZED TRANSPORTATION NETWORK



Source: WRCOG http://ca-wrcog.civicplus.com/DocumentCenter/View/194/Non-Motorized-Transportation-Plan-PDF?bidId=

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Regulatory Setting

Quimby Act

State law (California Government Code § 66477) requires the County to adopt an ordinance requiring subdivisions to dedicate land and/or impose a fee to provide parkland as a condition of approval of tentative or parcel maps (Quimby Act). Revenues generated may only be used to develop new or rehabilitate existing neighborhood/community parks and cannot be used to operate and maintain parks. The ordinance must include definite standards for determining the proportion of a subdivision to be dedicated or the amount of any in lieu fee to be paid and shall not exceed the amount necessary to provide 3 acres of park area per 1,000 persons residing within the subdivision. Under some circumstances, the city/county may increase the ratio to 5 acres of park per 1,000 residents in the subdivision.

County of Riverside

Park and Recreational Dedication Requirement – Ordinance No. 460

The County has determined that a minimum of 3 acres of land for each 1,000 persons residing in the County be devoted to neighborhood and county park and recreational facilities. However, the Board of Supervisors may increase the acreage to 5 acres per 1,000 residents if the acreage dedicated to parkland already exceeds 3 acres per 1,000 residents.

Section 10.35 of Ordinance No. 460 states the following as it pertains to parkland dedication and the payment of in lieu fees:

A. This section is adopted pursuant to Section 66477 of the Government Code which provides for the dedication of land or the payment of fees in lieu thereof for park and recreational facilities as a condition of approval of a tentative map or parcel map;
B. Whenever land that is proposed to be divided for residential use lies within the boundaries of a public agency designated to receive dedications and fees pursuant to this section, a fee and/or the dedication of land shall be required as a condition of approval of the division of land; and
C. It is hereby found and determined by the Board of Supervisors that the public interest, convenience, health, welfare, and safety requires that three acres of land for each 1,000 persons residing within the County of Riverside shall be devoted to neighborhood and community park and recreational facilities unless a Community Parks and Recreation Plan, as approved by the Board of Supervisors, determines that the amount of existing neighborhood and community park area exceeds that limit, in which case the Board determines that the public interest, convenience, health, welfare and safety requires that a higher standard, not to exceed five acres of land per 1,000 persons residing within the County, shall be devoted to neighborhood and community park and residential purposes.

The Project shall comply with the provisions of Ordinance No. 460, which requires parkland dedication and/or payment of the appropriate fees set forth in the Ordinance. Adherence to Ordinance No. 460 (**Standard Condition SC-REC-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Development Impact Fee Requirement - Ordinance No. 659

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to Ordinance No. 659 (**Standard Condition SC-REC-2**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

The Residential Project site components are located in the HVWAP, which requires the payment of DIF fees for each new residential unit developed prior to the issuance of the certificate of occupancy for the first residential unit. The Off-site Project components do not include any residential units; and for this reason, do not require the payment of DIF fees. Currently, the DIF fee payable for every single-family residence developed in the HVWAP is $3,598. DIF fees for projects in the HVWAP will be used to fund Criminal Justice Public Facilities, Library construction, fire protection, traffic signals, regional parks, regional trails, library books and regional multi-service centers.

General Plan Goals and Policies

Following are the applicable General Plan Goals and/or Policies:

- **Policy C 16.2** Develop a multi-purpose recreational trail network with support facilities that provide a linkage with regional facilities.
- **Policy C 16.3** Require that trail alignments either provide access to or link scenic corridors, schools, parks, and other natural areas.
- **Policy OS 20.4** Provide for the needs of all people in the system of County recreation sites and facilities, regardless of their socioeconomic status, ethnicity, physical capabilities, or age.
- **Policy OS 20.5** Require that development of recreation facilities occur concurrent with other development in the area.
- **Policy OS 20.6** Require new development to provide implementation strategies for the funding of both active and passive parks and recreational sites.

4.14.3 Thresholds of Significance

As discussed in Section 4.14.1, above, the Project impacts to four (4) criteria pertaining to recreation will be analyzed in this DEIR. According to the IS, the Project would have a significant impact if it would:

41. Parks and Recreation.

a. Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
b. Would the Project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
c. Is the Project located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?

42. Recreational Trails. Would the Project include the construction or expansion of a trail system?

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the County's IS. Potential changes in the environment associated with recreational facilities are addressed in response to the above thresholds in the following analysis.

4.14.4 Potential Impacts

THRESHOLD 41.a: Would 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

Demand for park and recreational facilities is generally the direct result of residential development. The Project proposes 574 single-family residences on 158.18 acres and would result in an increase of approximately 1,757 residents at Project build-out, based on 3.06 persons per single-family residential household as projected in the Population and Employment Forecasts in the General Plan. The additional 1,757 residents generated by the proposed Project are included in the General Plan population numbers.

The Project is required, by County Ordinance No. 460, to dedicate five acres of parkland per 1,000 new residents or pay an in-lieu fee instead of dedicating parkland. This Project is proposing to dedicate parkland. The new residents resulting from the buildout of the proposed Project would create demand for 8.79 acres of new parkland. The following formula determines the acreage required for the recreational facilities that will be required to serve the 1,757 Project residents based on the County requirement of 5 acres per 1,000 residents:

574 units x 3.06 persons/house = 1,756.44 residents
(1,757/1000) x 5 = 8.79 acres

As required by Ordinance No. 460, Section 10.35(f)1, the Project will dedicate 8.96-acres of community park land to the County. The community park will be open to the public and will include the following amenities:

- 1 baseball field (lighted);
- 2 soccer fields (lighted);
- ½-court basketball;
- Tot lot;
- Open-turf play area;
- Picnic area with shelter;
- Seating area:
- Restroom building; and
- Parking.

The Project will also construct that portion of the Regional Trail shown on **Figure 4.14-3, *Regional Trail: Urban/Suburban***, along the Holland Road and Eucalyptus Road frontages. The trail will

be 20'-wide (minimum), pursuant to County standards and will be located outside the Holland Road and the Eucalyptus Road ROW along the Residential Project frontages. The trail will be 10' wide and will be separated from the ROW by a 4'-wide (minimum) buffer and a 48" high (minimum) split rail PVC fence. Another 2'-wide (minimum) buffer will be located on the opposite side of the trail. The minimum overhead clearance will be 12'. The trail will be unpaved and will consist of a 6" thick layer of decomposed gravel base. The Regional Trail may also be used as a bike path. These improvements will be installed concurrently with the Holland Road and Eucalyptus Road roadway improvements.

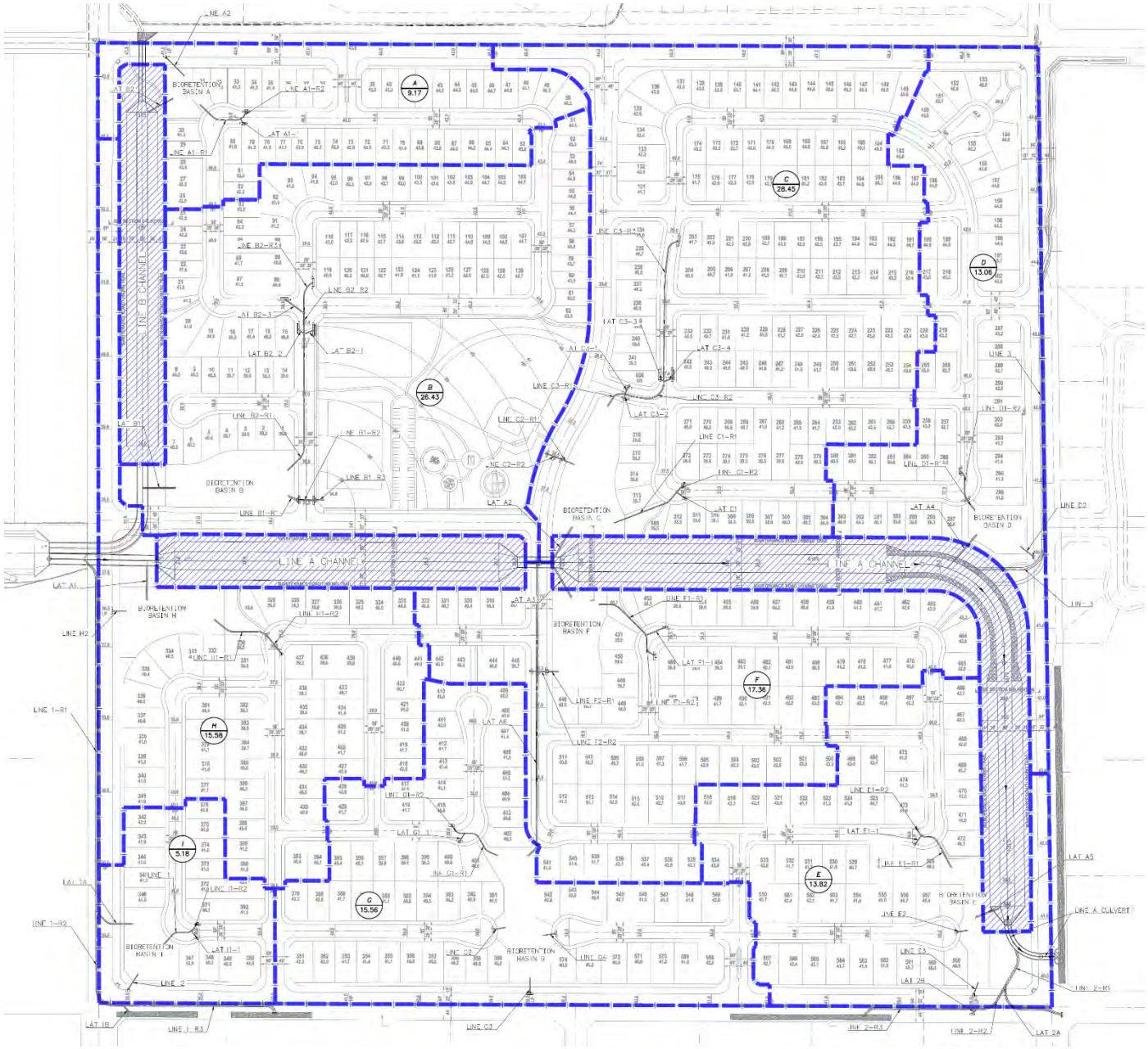
The Project proposes a total of 25.81 acres of open space, including the 8.96-acre community park and 13,264 LF of trails and landscaped paseos (mini-parks). In addition, 7.23 acres of drainage basins will be developed primarily for retention/detention; but will also provide additional open space. These sidewalks and trails will provide access to and connect all these features. Reference **Figure 4.14-2, *TTM 37439***.

According to **Figure 4.14-10, *WQMP Site Plan***, 9 drainage basins totaling 7.23 acres will also be installed concurrently with the development of the Project. As shown on **Figure 4.14-4**, the Line A channel (Lots 577, 581, and 588) will be flanked on both sides by a 16' wide maintenance road/hiking trail as well as 3-rail vinyl fencing on the channel side and tubular steel fencing on the outside edge of the trail.

Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel, will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes in the Project site will be Class II (unstriped and provide for shared use with motor vehicle traffic). The Class II bicycle lanes will be installed concurrently with the Craig Avenue and the Leon Road improvements.

The development of the Project itself has the potential to cause effects on recreational demand due to the increase in residents. However, the 8.96-acre community park included in the Project will provide new recreation facilities to satisfy the demand caused by the Project, as required by Ordinance No. 460. Because the community park will be open to the public, it will also serve the needs of the individual and the community, including providing the following for "league" play: baseball fields and soccer fields.

FIGURE 4.14-10
WQMP Site Plan



Source: Subchapter 8.3 of this DEIR, Initial Study

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The Project will also develop that portion of the Regional Trail shown on **Figure 4.14-3**, ***Regional Trail: Urban/Suburban***, within the Residential Project boundaries. The Regional Trail may also be used as a bicycle lane. The Project will also include Class II bicycle lanes on the Craig Avenue and Leon Road Project frontages, as well as multi-use trails on both sides of the Line A drainage channel.

To mitigate any Project impacts caused by the 1,757 new residents, the Project will dedicate and construct an 8.96-acre community park as required by Ordinance No. 460 (**Standard Condition SC-REC-1**, as outlined in Section 4.14.5).

The Project will also pay Development Impact Fees per Ordinance No. 659 (**Standard Condition SC-REC-2**, as outlined in Section 4.14.5).

These are standard conditions and are not considered unique mitigation under CEQA.

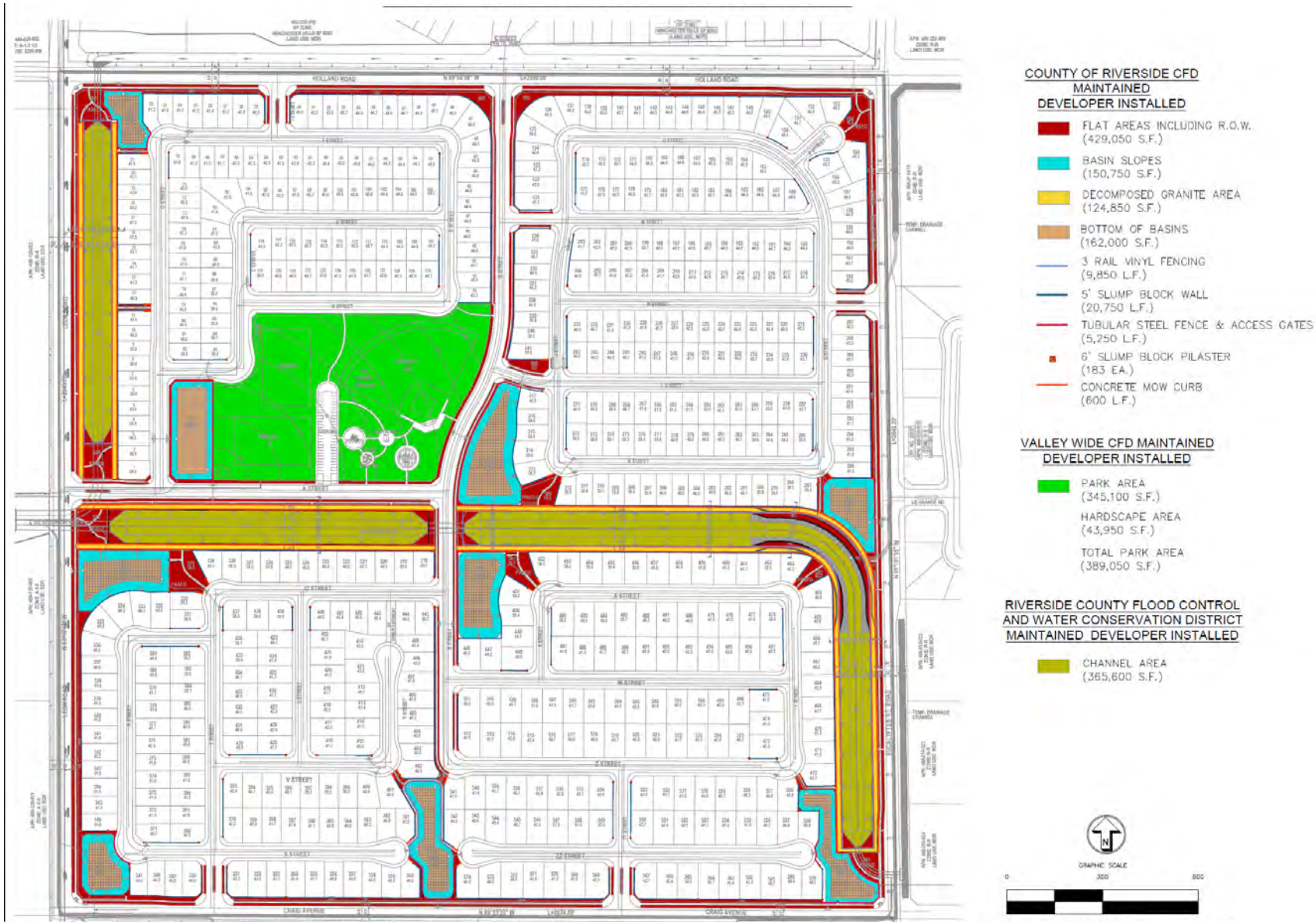
As shown on **Table 4.14-3, *Maintenance Matrix***, and **Figure 4.14-11, *TTM 37439 Maintenance Plan***, the majority of the Project's open space facilities will be maintained by a community facilities district (CFD). The park will be maintained by Valley Wide and the channel areas will be maintained by Riverside County Flood Control and Water Conservation District and the CFD.

Table 4.14-3
Maintenance Matrix

IMPROVEMENT		MAINTENANCE ENTITY			
Check all that apply	**QTY**	**CFD**	**CSA**	**HOA**	**OTHER**
Basins (WQMP)					
Bottom of Basins	162,000 SF	X			
Basin Slopes	150,750 SF	X			
Benches					
Bio-Swales (WQMP)					
Bridge Lights					
Fencing					
3 Rail Vinyl Fencing	9,850 LF	X			
5' Slump Block Wall	20,750 LF	X			
Tubular Steel Fence & Access Gates	5,250 LF	X			
Fossil Filters					
Graffiti	20,750 LF	X			
Landscaping (Median)	3271	X			
Landscaping (R-O-W)	124,485	X			
Monuments	4	X			
Monument Lighting	4	X			
Open Space					
Park Site					
Park Area	345,100 SF				Valley Wide CFD
Hardscape Area	43,950 SF				Valley Wide CFD
Street lights					
Traffic Signals					
Trails					
Decomposed Granite Area	124,850 SF	X			
Weed Abatement					
6' Slump Block Pilaster	183 Each	X			
Concrete Mow Curb	600 LF	X			
Channel Area	365,600 SF				RCFC & WCD
Flat Areas	231,711	X			

Source: Alhambra Group Landscape Architects November 2018

FIGURE 4.14-11
TTM 37439 MAINTENANCE PLAN



Source: Alhambra Group Landscape Architects November 2018

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With adherence to **Standard Conditions SC-REC-1** and **SC-REC-2**, and adherence to the maintenance responsibilities defined in **Table 4.14-3** and depicted on **Figure 4.14-11**, any impacts from the Project's recreational facilities which might have an adverse physical effect on the environment will be less than significant.

THRESHOLD 41.b: Would the Project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant

As discussed in Threshold 41.a, above, the Project will develop new community park, trail and bicycle lane facilities to serve Project residents and members of the public. The Project will satisfy Ordinance No. 460 by dedicating and developing an 8.96-acre community park to provide for the recreational needs of the 1,757 residents gathered at the Residential Project site and members of the public.

The Project will also develop (i) that portion of the Regional Trail located on the Holland Road and Eucalyptus Road Project frontages, as required by the HVWAP, (ii) multi-purpose trails on either side of the Line A drainage channel, and (iii) Class II bicycle lanes on the Craig Avenue and Leon Road Project frontages.

In addition, the Project will pay DIF fees as required by Ordinance No. 659. These recreational facilities will serve the needs of residents and members of the pubic within the Residential Project area eliminating the need for Project residents to look outside the Project site for recreational facilities and multi-purpose trails. The development of these on-site recreational facilities is expected to satisfy the needs of Project residents eliminating their need to use other neighborhood/regional parks or recreational facilities to the extent that a substantial physical deterioration of the facility would occur or be accelerated.

With the new community park dedication, construction of the portion of the Regional Trail, the multi-purpose trails and the Class II bicycle lanes, impacts to regional parks outside the Project site will be less than significant.

The development and operation of the proposed recreational facilities, along with the entirety of the proposed Project, would require grading and development activities that would or would have the potential to contribute to physical impacts evaluated in other subchapters of this DEIR which include: aesthetics, agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, and noise. Please refer to these subchapters for the pertinent analysis contained therein, as the on-site recreation resources are a Project component (see Chapter 3, Project Description).

THRESHOLD 41.c: Is the Project located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?

Less Than Significant

Please reference the discussion in Thresholds 41.a, and 41.b, above.

To mitigate any Project impacts caused by the 1,757 new residents, the Project will dedicate and construct an 8.96-acre community park as required by Ordinance No. 460 (**Standard Condition SC-REC-1**, as outlined in Section 4.14.5).

The Project will also pay Development Impact Fees per Ordinance No. 659 (**Standard Condition SC-REC-2**, as outlined in Section 4.14.5).

These are standard conditions and are not considered unique mitigation under CEQA. With adherence to **Standard Conditions SC-REC-1** and **SC-REC-2**, any impacts will be less than significant.

THRESHOLD 42: Does the Project include the construction or expansion of a trail?

Less Than Significant

See the discussion in 41.a, above. The Project will construct that portion of the Regional Trail shown on **Figure 4.14-3, *Regional Trail: Urban/Suburban***, along the Project frontages on Holland Road and Eucalyptus Road. The area containing the trail will be 20'-wide (minimum), pursuant to County standards and will be located outside the Holland Road and Eucalyptus Road rights of way. The trail will be 10' wide, separated from the ROW by a 4'-wide (minimum) buffer and a 48" high (minimum) split rail PVC fence. Another 2'-wide (minimum) buffer will be located on the opposite side of the trail. The minimum overhead clearance will be 12'. The trail will be unpaved and will consist of a 6" thick layer of decomposed gravel base. The Regional Trail may also be used as a bike path.

The Project will also install Class II bicycle lanes on the Craig Avenue and Leon Road Project frontages, as well as multi-use trails for walking, bicycle riding, and maintenance vehicles on both sides of the Line A drainage channel.

In addition, the Project will pay DIF fees as required by Ordinance No. 659.

The portion of the Regional Trail within the Residential Project area, the multi-use trails along the drainage channel, and the Class II bicycle lanes will serve the needs of Project residents and members of the pubic consistent with the requirements of Ordinance No. 460. These on-site trails and bicycle lanes are expected to satisfy the needs of Project residents such that they will not need to use other trails or bicycle lane facilities. With construction of the portion of the Regional Trail and the walking trails with the Project, impacts due to the construction or expansion of a trail will be less than significant.

4.14.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

SC-REC-1 As a condition of approval of a final subdivision map or parcel map, the Project applicant shall dedicate land, pay a fee in-lieu thereof, or both at the option of the Agency for neighborhood and community park or recreational purposes.

SC-REC-2 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation Measure(s)

No mitigation measures are required for recreation.

As discussed in the analysis for Threshold 41.b, above, standards conditions and/or mitigation measures, associated with aesthetics, agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous resources, hydrology/water quality, land use/planning, noise, population/housing, recreation, transportation/traffic, tribal cultural resources, utility and service systems will apply to the recreation resources, as the on-site recreation resources are a Project component (see Chapter 3, Project Description).

4.14.6 Cumulative Impacts

The cumulative study area for recreation resources is the County of Riverside, which is the area used by the County when determining its park-to-population ratio goals. The County requires new development to provide a minimum of three acres of public open space for every 1,000 residents or pay an in-lieu fee. The Board of Supervisors may increase the acreage to 5 acres per 1,000 residents if the acreage dedicated to parkland already exceeds 3 acres per 1,000 residents.

The Project is proposing to dedicate 8.96-acres to the County and develop on the land a community park with recreational facilities appropriate for “league” play. At 8.96-acres, the community park will exceed the 5 acres per 1,000-resident maximum and is consistent with Ordinance No. 460.

The Project will also include 25.81-acres of open space for the development of paseos, passive landscape areas, and perimeter landscaping, and will develop drainage basins on 7.23 acres. No parkland credit is requested for the open space or drainage basins as the dedication and construction of the 8.96-acre community park satisfies the requirements of Ordinance No. 460.

Implementation of the proposed Project in combination with cumulative projects in the area would increase the use of existing parks and recreation facilities. However, as future residential development is proposed, the County would require developers to provide the appropriate amount of parkland or pay the in-lieu fees, which would contribute to future recreational facilities. Payment of these fees and/or implementation of new parks on a project-by-project basis would offset cumulative parkland impacts by providing funding for new and/or renovated parks equipment and facilities, or new parks.

The cumulative impacts associated with development of the Project would be a less than significant impact to recreation resources.

4.14.7 Unavoidable Significant Adverse Impacts

The existing recreation resources and system in the vicinity of the proposed Project would be impacted by the Project from the new residential units and associated population. The Project will develop recreation facilities (including the 8.96-acre community park, the installment of sidewalks, the development of a portion of the Regional Trail required by the HVWAP, and bike lanes), and will pay DIF fees as required by Ordinance No. 659. The development of these recreational facilities and this DIF fee payment will ensure that the proposed Project will not cause significant unavoidable adverse impacts to the area recreation resources.

4.15 TRANSPORTATION

4.15.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of transportation from implementation of the Project. The Transportation/Traffic Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

43. Circulation.

a. Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
d. Alter waterborne, rail or air traffic?
e. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?
f. Cause an effect upon, or a need for new or altered maintenance of roads?
g. Cause an effect upon circulation during the project's construction?
h. Result in inadequate emergency access or access to nearby uses?
i. Conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?

44. Bike Trails.

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 43.c through 43.h, related to transportation/traffic (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified either "no impact" or "less than significant impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining four (4) issue areas, 43.a, 43.b, 43.i, and 44, related to transportation/traffic in the questions asked above, **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The Subchapter title Transportation/Traffic and the heading for 43. Circulation were revised. The text contained in issue areas 43.a. and 43.i. was combined and modified; additional language was added to issue area 44. These revisions will be reflected in the DEIR.

Therefore, the following three (3) issue areas will be analyzed in the DEIR:

43. Transportation.
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

44. Bike Trails.
a. Include the construction or expansion of a bike system or bike lanes?

Standard conditions SC-TR-1 (Transportation Uniform Mitigation Fee), **SC-TR-2** (Traffic Control Plan), and **SC-PS-1** (development impact fee), have been carried over to this DEIR from the IS.

There were no mitigation measures presented in the IS to be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- Ordinance No. 659 (An Ordinance of the County of Riverside Establishing a Development Impact Fee Program) and Ordinance No. 824 (An Ordinance of the County of Riverside Authorizing Participation in the Western Riverside County Transportation Uniform Mitigation Fee Program)
  http://rctlma.org/Departments/Administrative-Services/Useful-Ordinances
- *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis Report County of Riverside,* prepared by Urban Crossroads, June 5, 2018 (*TIA,* **Appendix K**)
- *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis Vehicle Miles Traveled,* prepared by Urban Crossroads, February 28, 2019 (*TIA - VMT,* **Appendix P**)

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter # 6: Southern California Association of Governments (dated 11/7/18):

This letter contains comments pertaining to transportation, air quality, and land use compatibility impacts:

- Southern California Association of Governments (SCAG) is the authorized regional agency for Inter-Governmental Review of programs proposed for Federal financial assistance and direct Federal development activities.
- SCAG reviews EIRs for Projects of regional significance for consistency with regional plans pursuant to CEQA and the CEQA Guidelines.
- SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for the preparation of the Regional Transportation Plan (RTP), including the Sustainable Communities Strategy (SCS).
- SCAG has reviewed the NOP for the Project.
- SCAG asks that environmental documentation be mailed to SCAG's office in Los Angeles or emailed to the contact information in the letter.

- The Lead Agency has the sole discretion in determining a local project's consistency with the RTP/SCS.
- SCAG recommends preparing an analysis that compares the Project side-by-side with SCAG's 2016 RTP/SCS Goals to determine whether the Project is consistent, inconsistent or in-applicable with the regional goals.
- A wide range of land use and transportation strategies are included in the 2016 RTP/SCS.
- Adopted demographics and growth forecasts (population, households and employment) are provided for the SCAG Region and for unincorporated Riverside County for the years 2020, 2035, and 2040.
- The Final Program EIR for the 2016 RTP/SCS includes a list of project-level performance-based mitigation measures that are applicable and feasible. These mitigation measures may be considered by the County for adoption and implementation.
- The County as Lead Agency is responsible for assigning project-level mitigation to meet project-level performance standards for each CEQA resource category.

Response: Senate Bill 375, the Sustainable Communities and Climate Protection Act of 2008 (SB 375), which was passed by the legislature as a tool for working towards AB 32's reduction goals, requires CARB to set regional greenhouse gases (GHG) emissions targets and requires each California metropolitan planning organizations to develop a Sustainable Community Strategy (SCS) that integrates housing, transportation, and land use policy. These mandates were designed with the intention of reducing vehicle miles traveled, and thus, GHG emissions. Additionally, the CARB Scoping Plan outlines ways to achieve GHG reductions in California as required by AB 32. Please reference the discussion in Subchapter 4.8, Greenhouse Gas Emissions of this DEIR. The Project is consistent with the goals of AB32. A side-by-side comparison of SCAG's 2016 RTP/SCS Goals with discussions of the consistency, non-consistency, or non-applicability of the goals and supportive analysis in a table format (recommend by SCAG) is contained in Subchapter 4.11, Land Use and Planning of this DEIR.

Comment Letter # 7: California Department of Transportation (dated 11/26/18):

This letter contains recommendations regarding multimodal accessibility and traffic forecasting:

- The Riverside Transit Agency (RTA) does not provide bus service to the Project site. The nearest bus stop is 2.3 miles away (11 minutes bicycling or 45 minutes walking). Please coordinate with the RTA to address any potential route modifications and/or bus stop improvements to serve the Project that may be warranted.
- The County's Transportation Demand Management (TDM) requirements (Ordinance No. 726) requires new development projects to develop a TDM plan that includes: a proposed trip level and outlines TDM measures to achieve it. At a minimum, the trip level shall be equal to or greater than 12% of the vehicle trips that would normally be generated by the Project commencing in 1994, 20% of the vehicle trips that would normally be generated by the Project commencing in 2000, and 30% of the vehicle trips that would normally be generated by the Project commencing in 2006. Caltrans asks the Project proponent to consider including TDM measures that will promote the use of alternative transportation modes, which may include, but not be limited to: rideshare, vanpools, on-site amenities that would eliminate the need for additional trips (such as, cafeterias/restaurants), development that is pedestrian-oriented, transit-oriented and other non-traditional site designs, and bus stop improvements.
- The Office of Forecasting has reviewed the Project TIA to analyze past, present, and future traffic volumes and operational characteristics and provides the following comments:

  - TIA Exhibit 4-5: Project Only (Phase 2 Project Buildout: 2025) Traffic Volumes: Regarding intersection #4, consider substituting the intersection at I-215 at Newport Road, which is 3 miles from the Project site, for the intersection at I-215 NB Ramps and Scott Road which is 4.1 miles away from the Project site.
  - Amend the TIA to include the I-215 / Newport Road NB and SB ramps.
  - Revise the trip distribution in the TIA so a larger number of NB trips use the I-215/Newport Road interchange.
  - Segment analysis – Perform the basic freeway merge, diverge analysis in the Highway Capacity Software (HCS 7) Freeway "Facility" Module.
  - The AM Peak Hour in the HCS 7 analysis was performed between 1 AM and 4 AM– please explain why this was done and if it is a mistake, please correct it.
- When these comments have been addressed, please forward the revised TIA to Caltrans for further consideration and comment.

Response: The comments pertaining to consultation with RTA related to a potential bus stop, and suggested TDM measures (most of which do not apply to the Project) have been noted. Potential TDM measures have been incorporated into the Project are provision of, and accessibility to, regional trails and bike lanes. The Project area is currently served by the Riverside Transit Agency (RTA) with bus services along Antelope Road, Menifee Road and Scott Road via Route 61. RTA Route 208 has services along the I-215 Freeway. There are no existing transit routes that could potentially serve the Project. Transit service is reviewed and updated by the RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

The trip distribution used for the TIA was jointly developed with Riverside County staff. As Holland Road between Leon Road and Briggs Road is currently an unpaved dirt road, and Scott Road provides a less congested east west alternative with fewer traffic signals than Newport Road, it was determined that drivers would be less likely to utilize Newport Road to access the I-215 Freeway for northbound freeway trips. As such, a larger distribution of Project traffic utilizes the more accessible route to the I-215 Freeway, via Scott Road. Furthermore, capacity enhancements currently underway to the I-215 Freeway at Scott Road interchange were also determined to make this route attractive under future year conditions. In summary, the trip distribution patterns as currently reflected in the TIA evaluates the proposed Project's highest potential impact to a State Highway System facility. No additional changes are recommended.

Basic freeway segment and ramp junction merge/diverge analysis has already been performed using individual modules in the HCS 7 software package consistent with standard practice.

As discussed in Section 2.5 Freeway Mainline Segment Analysis of the TIA, the AM Peak Hour analysis was performed with the maximum volumes from 7 AM to 10 AM reported from the Caltrans Performance Measurement Systems (PeMS) website. The titles on the HCS7 Basic Freeway Report indicates the analysis segment number, not the time period. For example, "1 AM I-215 SB, N of Scott" refers to segment #1, AM Peak Hour, I-215 Freeway Southbound, North of Scott Road. As such, no revision is necessary.

No other comments regarding transportation were received in response to the NOP/IS (circulated from October 8, 2018 through November 6, 2018) or at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 43.a., 43.b., and 44.a. are the focus of the following evaluation of transportation.

All the Tables and Figures in this Subchapter are from the *Traffic Impact Analysis*, unless stated otherwise.

The following discussions are abstracted from the above referenced technical study, which is provided in Volume 2 of the DEIR, the Technical Appendices.

4.15.1.1 Traffic Impact Analysis

Overview

The purpose of the *TIA* is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project and recommend improvements to achieve acceptable circulation system operational conditions. The *TIA* was prepared in accordance with the County of Riverside Transportation Department Traffic Impact Analysis Preparation Guide, the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies, and consultation with County of Riverside staff during the scoping process.

Potential impacts were assessed for two development phases. **Figure 14.5-1, *Preliminary Site Plan***, identifies the proposed land use and planning areas which are included in Phase 1 and Phase 2. The two phases and their anticipated opening years are as follows:

- Phase 1 2021 – 317 single-family residential units and an 8.2-acre park; and
- Phase 2 Project Buildout 2025 – Phase 1 development plus 257 additional single-family residential units.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017.

Phase 1 (2021) of the Project is estimated to generate a net total of 2,998 trip-ends per day on a typical weekday with 235 AM peak hour trips and 314 PM peak hour trips. Phase 2 Project Buildout (2025) is estimated to generate a net total of 5,425 trip-ends per day with 425 AM peak hour trips and 568 PM peak hour trips.

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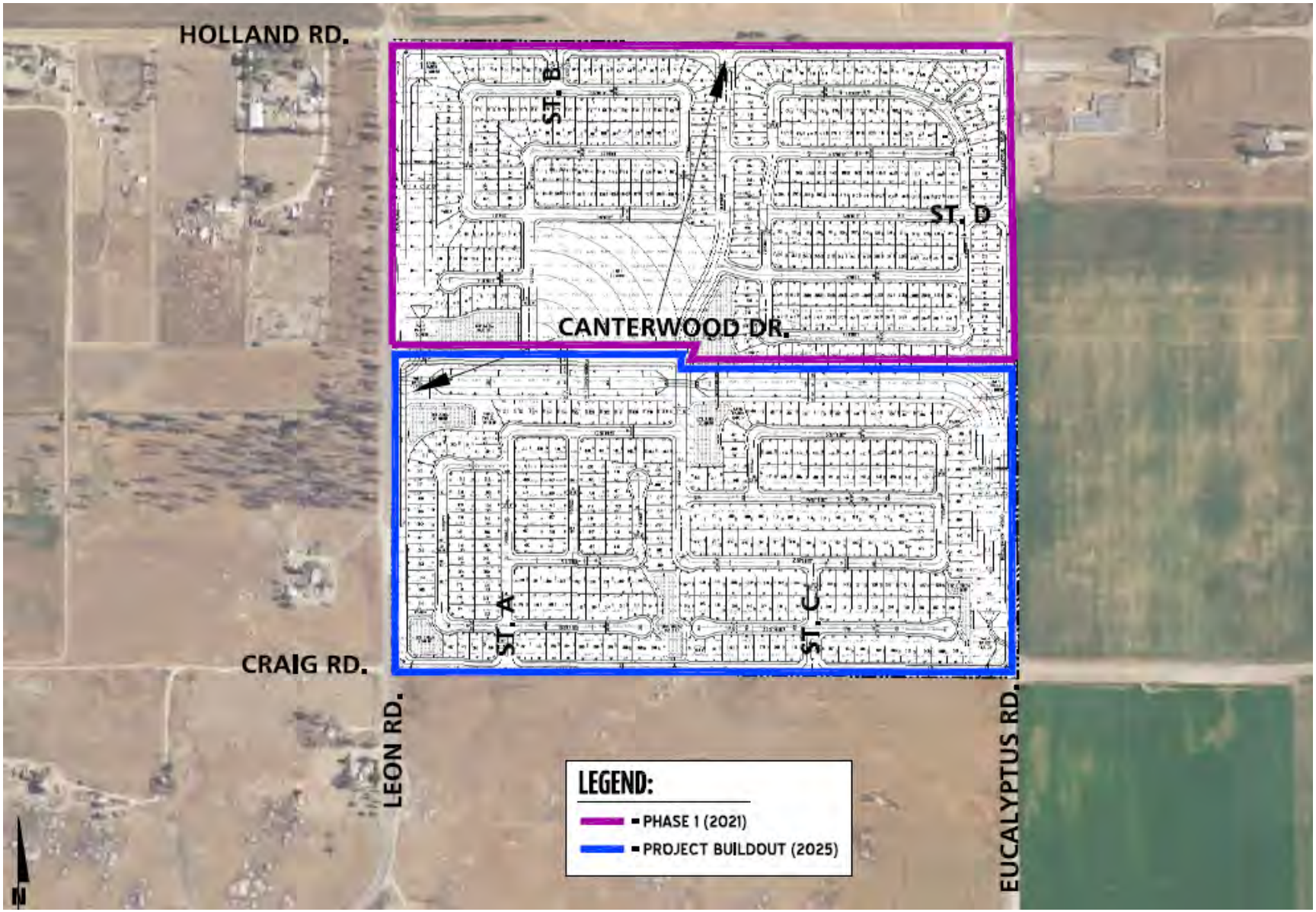
FIGURE 4.15-1
PRELIMINARY SITE PLAN



Source: TIA (**Appendix K**)

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Analysis Scenarios

Potential impacts to traffic and circulation were evaluated for each of the following conditions in the TIA:

- Existing (2018) Conditions. Existing physical conditions were disclosed to represent the baseline traffic conditions as they existed at the time the *TIA* was prepared.
- Existing plus Project (E+P) (Phase 1) Conditions. The E+P analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. This analysis scenario was evaluated for both Phase 1 and Phase 2 Project Buildout traffic conditions.
- E+P (Phase 2 Project Buildout) Conditions. The E+P analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. This analysis scenario was evaluated for both Phase 1 and Phase 2 Project Buildout traffic conditions.
- Existing plus Ambient Growth Plus Project (EAP) (Phase 1 2021) Conditions. The EAP (Phase 1 2021) traffic conditions analyses determine potential traffic impacts based on a comparison of the EAP traffic conditions to Existing conditions. To account for background traffic growth, an ambient growth factor from Existing conditions of 6.12% (2 percent per year over 3 years, compounded annually) for 2021 (Phase 1) conditions are included for EAP traffic conditions. Consistent with Riverside County traffic study guidelines, the EAP analysis is intended to identify "Opening Year" deficiencies associated with the development of the proposed Project based on the expected background growth within the study area.
- EAP (Phase 2 Project Buildout 2025) Conditions. The EAP (Phase 2 Project Buildout 2025) traffic conditions analyses determine potential traffic impacts based on a comparison of the EAP traffic conditions to Existing conditions. To account for background traffic growth, an ambient growth factor from Existing conditions of 14.87% (2 percent per year over 7 years, compounded annually) for 2025 (Phase 2 Project Buildout) conditions are included for EAP traffic conditions. Consistent with Riverside County traffic study guidelines, the EAP analysis is intended to identify "Opening Year" deficiencies associated with the development of the proposed Project based on the expected background growth within the study area.
- Existing plus Ambient Growth Plus Project Plus Cumulative (EAPC) (Phase 1 2021) Conditions. The EAPC (Phase 1 2021) traffic conditions analyses determine the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 6.12% (for Phase 1 2021 conditions) are included for EAPC traffic conditions. This comprehensive list was compiled from information provided by the County of Riverside, City of Menifee, City of Murrieta, and City of Temecula.
- EAPC (Phase 2 Project Buildout 2025) Conditions. The EAPC (Phase 2 Project Buildout 2025) traffic conditions analyses determine the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 14.87% (for Phase 2 Project Buildout 2025 conditions) are included for EAPC traffic conditions. This comprehensive list was compiled from information provided by the County of Riverside, City of Menifee, City of Murrieta, and City of Temecula.

Study Area

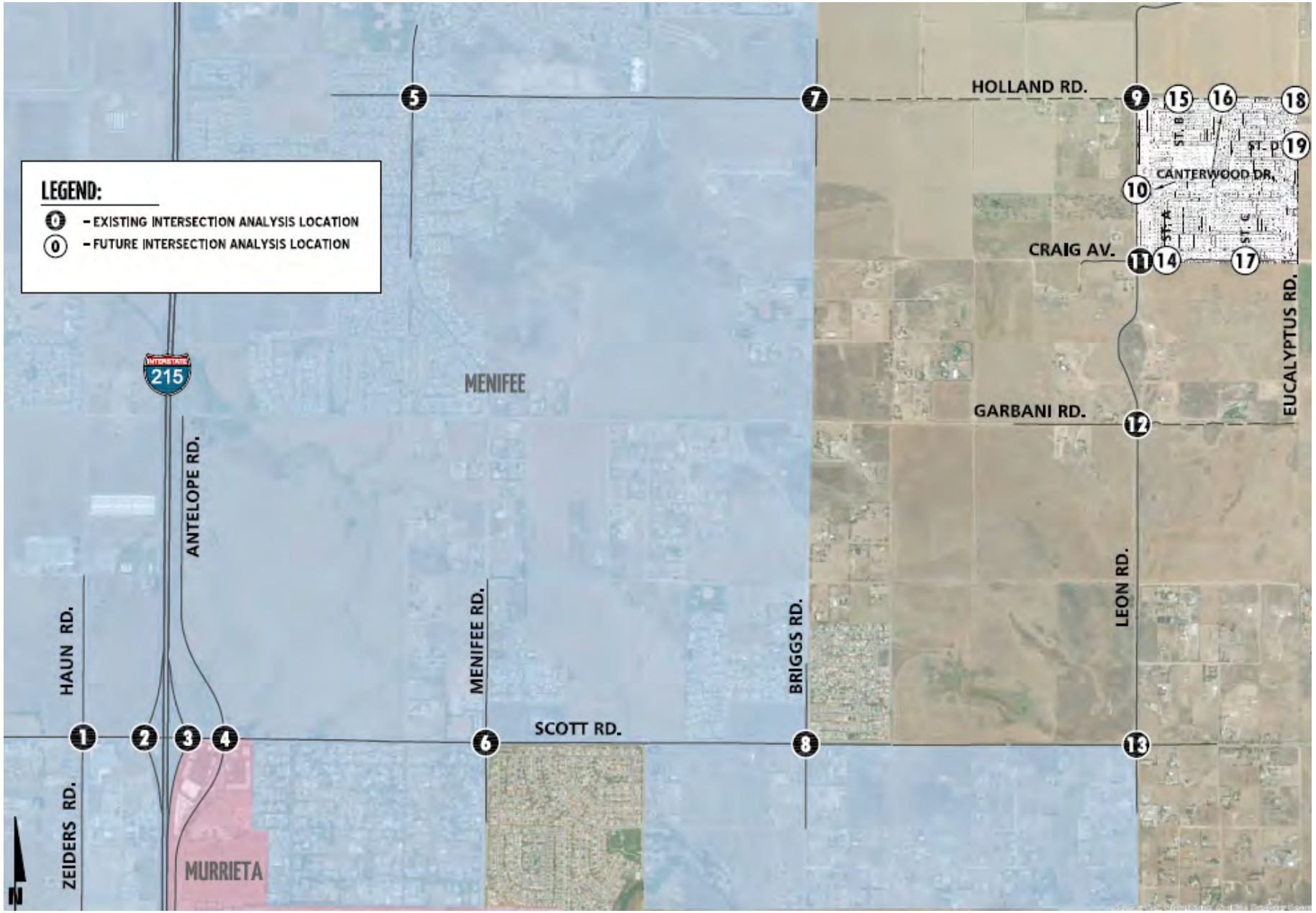
Intersections

The Project study area was defined in coordination with the County of Riverside. Consistent with County of Riverside traffic study guidelines, the study area includes any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed project will add 50 or more peak hour trips. **Figure 4.15-2, *Location Map***, and **Table 4.15-1, *Intersection Analysis Locations***, presents the study area and intersection analysis locations.

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).

To ensure that the *TIA* satisfies the needs of the County of Riverside, a Project specific traffic study scoping agreement was submitted for review by County 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 County of Riverside is included in Appendix 1.1 of the *TIA*.

FIGURE 4.15-2
LOCATION MAP



Source: TIA (**Appendix K**)

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Table 4.15-1
Intersection Analysis Locations

ID	Intersection Location	Jurisdiction	CMP
1	Haun Rd./Zeiders Rd. & Scott Rd.	Menifee	No
2	I-215 Southbound Ramps & Scott Rd.	Caltrans, Menifee	Yes
3	I-215 Northbound Ramps & Scott Rd.	Caltrans, Menifee, Murrieta	Yes
4	Antelope Rd. & Scott Rd.	Menifee, Murrieta	No
5	Menifee Rd. & Holland Rd.	Menifee	No
6	Menifee Rd. & Scott Rd.	Riverside County, Menifee	No
7	Briggs Rd. & Holland Rd.	Riverside County, Menifee	No
8	Briggs Rd. & Scott Rd.	Riverside County, Menifee	No
9	Leon Rd. & Holland Rd.	Riverside County	No
10	Leon Rd. & Canterwood Dr. – Future Intersection	Riverside County	No
11	Leon Rd. & Craig Av.	Riverside County	No
12	Leon Rd. & Garbani Rd.	Riverside County	No
13	Leon Rd. & Scott Rd.	Riverside County, Menifee	No
14	St. A & Craig Av. – Future Intersection	Riverside County	No
15	St. B & Holland Rd. – Future Intersection	Riverside County	No
16	Canterwood Dr. & Holland Rd. – Future Intersection	Riverside County	No
17	St. C & Craig Av. – Future Intersection	Riverside County	No
18	Eucalyptus Rd. & Holland Rd. – Future Intersection	Riverside County	No
19	Eucalyptus Rd. & St. D – Future Intersection	Riverside County	No

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 (per *Highway Capacity Manual* [HCM] analysis) should be analyzed in the scope of the traffic study for projects that add 50 to 100 peak hour trips. Because impacts to freeway segments dissipate with distance from the point of entry, quantitative study of freeway segments beyond those immediately adjacent to the point of entry is not being proposed. As such, the *TIA* evaluated the segments shown on **Table 4.15-2, *Freeway Mainline Segment Analyses Locations***.

Table 4.15-2
Freeway Mainline Segment Analysis Locations

ID	Freeway Mainline Segments
1	I-215 Freeway Southbound – North of Scott Road
2	I-215 Freeway Southbound – South of Scott Road
3	I-215 Freeway Northbound – North of Scott Road
4	I-215 Freeway Northbound – South of Scott Road

4.15.1.2 Methodologies

The following documents the methodologies and assumptions used to perform the *TIA*.

Level of Service

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.

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 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.

Signalized Intersections

- *County of Riverside, City of Menifee*

The County of Riverside and City of Menifee require signalized intersection operations analysis based on the methodology described in the HCM 6. 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 4.15-3, *Signalized Intersection Description of LOS***.

Table 4.15-3
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

- *California Department of Transportation (Caltrans)*

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies*, the traffic modeling and signal timing optimization software package Synchro (Version 10) was utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e. I-215 Freeway ramps at Scott Road). Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM 6. 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 this analysis. All signalized study area intersections with the County of Riverside, and City of Menifee have also utilized the Synchro software.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15- minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM 6, 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.

Unsignalized Intersections

The County of Riverside and City of Menifee require the operations of unsignalized intersections be evaluated using the methodology described in the HCM 6. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle as described in **Table 4.15-4, *Unsignalized Intersection Description of LOS***.

Table 4.15-4
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

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.

Freeway Off-Ramp Queuing Analysis

The study area for the *TIA* includes the freeway-to-arterial interchange of the I-215 Freeway at Scott 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 Scott 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.

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 proposed 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.

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. 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.

Traffic Signal Warrant Analysis Methodology

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

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. The Caltrans CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. Specifically, the *TIA* utilized the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. Warrant 3 is appropriate to use for the *TIA* because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). The speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

Traffic signal warrant analyses were performed for all of the study area intersections, with the exception of the following locations as shown on **Table 4.15-5, *Signalized Intersection Locations***, which are currently signalized.

Table 4.15-5
Signalized Intersection Locations

ID	Intersection Location
1	Haun Rd./Zeiders Rd. & Scott Rd.
2	I-215 Southbound Ramps & Scott Rd.
3	I-215 Northbound Ramps & Scott Rd.
4	Antelope Rd. & Scott Rd.
6	Menifee Rd. & Scott Rd.
8	Briggs Rd. & Scott Rd.

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 (i.e., other warrants such as interruption of continuous traffic, pedestrian volumes, school crossing, etc.). 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.

Freeway Mainline Segment Analysis

The freeway system in the study area has been broken into segments defined by the freeway-to-arterial interchange locations. The freeway segments were evaluated in the *TIA* based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in the HCM 6 and performed using Highway Capacity Software (HCS) 7 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 4.15-6, *Description of Freeway Mainline LOS***, illustrates the freeway segment LOS descriptions for each density range utilized for the freeway mainline segment analysis.

Table 4.15-6
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

[1] pc/mi/ln = passenger cars per mile per lane.

The number of lanes for existing baseline conditions has been obtained from field observations conducted in January 2018. These existing freeway geometrics were utilized for all analysis scenarios. The I-215 Central Project includes the construction of a mixed- flow lane in each direction of travel along the I-215 Freeway between Nuevo Road and Scott Road. Based on information obtained from Riverside County Transportation Commission (RCTC), and as verified through field observations, that project was completed in late 2015.

The I-215 Freeway mainline volume data was obtained from the Caltrans Performance Measurement System (PeMS) website for the segments of the I-215 Freeway interchange at Scott Road. The data was obtained from August 2017 plus 2% to reflect 2018 traffic conditions. 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, was utilized in the analysis in an effort to not overstate traffic volumes and peak hour deficiencies. As such, actual vehicles (as opposed to passenger-car-equivalent (PCE) volumes) were utilized for the purposes of the basic freeway segment analysis.

Freeway Merge/Diverge Ramp Junction Analysis

The freeway system in the study area was broken into segments defined by freeway-to-arterial interchange locations resulting in two existing on and off ramp locations. Although the HCM 6 indicates the influence area for a merge/diverge junction is 1,500 feet, the analysis presented in the *TIA* was performed at the Scott Road 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 Urban Crossroads has worked on along the I-215 corridor.

The merge/diverge analysis is based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS 7 software. The measure of effectiveness (reported in passenger car/mile/lane) is 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 4.15-7, *Description of Freeway Merge and Diverge LOS*** presents the merge/diverge area level of service descriptions for each density range utilized for the analysis.

Table 4.15-7
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.

The ramp data (per the count data presented in Appendix 3.1 of the *TIA*) were utilized to flow conserve the mainline volumes to determine the I-215 Freeway mainline volumes south of Scott Road. Similar to the basic freeway segment analysis, actual vehicles (as opposed to passenger-car-equivalent volumes) have been utilized for the purposes of the freeway ramp junction (merge/diverge) analysis.

4.15.1.4 Project Design Features

Site Adjacent Roadway Improvements

The site adjacent roadway improvements for the Project are described below. **Figure 4.15-3, *Phase 1 (2021) Site Adjacent Roadway and Site Access Improvements***, illustrates the site adjacent roadway improvement for Phase 1 (2021) and **Figure 4.15-4, Phase 2 Project Buildout (2025) *Site Adjacent Roadway and Site Access Improvements***, illustrates the site adjacent roadway improvements for Phase 2 Project Buildout (2025).

Phase 1 2021

- ***Leon Road*** – Leon Road is a north-south oriented roadway located on the Project's western boundary. The Project will construct Leon Road between Holland Road and Canterwood Drive at its ultimate half-section width as a Major Highway (118-foot right-of-way).
- ***Holland Road*** – Holland Road is an east-west oriented roadway located on the Project's northern boundary. The Project will construct Holland Road between Leon Road and Eucalyptus Road at its ultimate half- section width as a Major Highway (118-foot right-of-way). Additionally, construct a 32-foot paved roadway between Briggs Road and Leon Road for secondary access.
- ***Eucalyptus Road*** – Eucalyptus Road is a north-south oriented roadway located on the Project's eastern boundary. The Project will construct Eucalyptus Road between Holland

Road and the southern boundary of Phase 1 at its ultimate half-section width as a Secondary (100-foot right-of-way).

Phase 2 Project Buildout 2025

- ***Leon Road*** – Leon Road is a north-south oriented roadway located on the Project's western boundary. Construct Leon Road between Canterwood Drive and Craig Avenue at its ultimate half-section width as a Major Highway (118-foot right-of-way).
- ***Craig Avenue*** – Craig Avenue is an east-west oriented roadway located on the Project's southern boundary. Construct Craig Avenue between Leon Road and Eucalyptus Road at its ultimate half- section width as a Secondary (100-foot right-of-way).
- ***Eucalyptus Road*** – Eucalyptus Road is a north-south oriented roadway located on the Project's eastern boundary. Construct Eucalyptus Road between the northern boundary of Phase 2 and Craig Avenue at its ultimate half-section width as a Secondary (100-foot right-of-way).

As applicable, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the County of Riverside General Plan Circulation Element.

Site Access Improvements

The Project is proposed to have access onto Leon Road via Canterwood Drive, Holland Road via Street B and Canterwood Drive, Craig Avenue via Street A and Street C, and Eucalyptus Road via Street D. All Project driveways are proposed to be stop controlled on the minor street with free-flow along the major streets and are proposed to allow for full access. Regional access to the Project site will be provided by the I-215 Freeway (via the Scott Road interchange).

As part of the development, the Project will construct improvements on the site adjacent roadways of Leon Road, Eucalyptus road, Holland road and Craig Avenue. Roadway improvements necessary to provide site access and on-site circulation are assumed to be constructed in conjunction with site development.

The site access driveway improvements for the Project are described below. **Figure 4.15-3, *Phase 1 (2021) Site Adjacent Roadway and Site Access Improvements***, illustrates the on-site and site adjacent intersection lane improvements for Phase 1 (2021). **Figure 4.15-4, *Phase 2 Project Buildout (2025) Site Adjacent Roadway and Site Access Improvements***, illustrates the on-site and site adjacent recommended intersection lane improvements for Phase 2 Project Buildout (2025). Construction of on-site and site adjacent improvements are shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

The following intersection improvements represent the minimum lanes that must be provided to achieve acceptable peak hour operations. As there is not anticipated to be sufficient receiving lanes beyond the Project, a minimum of one lane should be provided in each direction of travel until such time that the adjacent roadways are also widened to their ultimate General Plan roadway classification.

Phase 1 2021

- ***Leon Road & Holland Road (#9)*** – Install a stop control on all approaches and construct the intersection with the following geometrics:
  - 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; and
  - Westbound Approach: One shared left-through-right turn lane.
- ***Leon Road & Canterwood Drive (#10)*** – Install a stop control on the westbound approach and construct the intersection with the following geometrics:
  - 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); and
  - Westbound Approach: One shared left-right turn lane.
- ***Street B & Holland Road (#15)*** – Install a stop control on the northbound approach and construct the intersection with the following geometrics:
  - Northbound Approach: One shared left-right turn lane.;
  - Southbound Approach: N/A;
  - Eastbound Approach: One shared through-right turn lane; and
  - Westbound Approach: One shared left-through lane.
- ***Canterwood Drive & Holland Road (#16)*** – Install a stop control on the northbound approach and construct the intersection with the following geometrics:
  - Northbound Approach: One shared left-right turn lane;
  - Southbound Approach: N/A;
  - Eastbound Approach: One shared through-right turn lane; and
  - Westbound Approach: One shared left-through lane.
- ***Eucalyptus Road & Holland Road (#18)*** – Construct the intersection with the following geometrics:
  - Northbound Approach: One left turn lane;
  - Southbound Approach: N/A;
  - Eastbound Approach: One right turn lane; and
  - Westbound Approach: N/A
- ***Eucalyptus Road & Street D (#19)*** – Install a stop control on the eastbound approach and construct the intersection with the following geometrics:
  - Northbound Approach: One shared left-through lane;
  - Southbound Approach: One shared through-right turn lane;
  - Eastbound Approach: One shared left-right turn lane; and
  - Westbound Approach: N/A.

Phase 2 Project Buildout 2025

- ***Leon Road & Craig Avenue (#11)*** – Install a stop control on the eastbound and westbound approaches and construct the intersection with the following geometrics:
  - Northbound Approach: One shared left-through-right turn lane;
  - Southbound Approach: One left turn lane with a minimum of 150-feet of storage and one shared through-right turn lane;
  - Eastbound Approach: One shared left-through-right turn lane; and
  - Westbound Approach: One shared left-through-right turn lane.
- ***Street A & Craig Avenue (#14)*** – Install a stop control on the southbound approach and

construct the intersection with the following geometrics:
  - Northbound Approach: N/A;
  - Southbound Approach: One shared left-right turn lane;
  - Eastbound Approach: One shared left-through lane; and
  - Westbound Approach: One shared through-right turn lane.
- ***Street C & Craig Avenue (#17)*** – Install a stop control on the southbound approach and construct the intersection with the following geometrics:
  - Northbound Approach: N/A;
  - Southbound Approach: One shared left-right turn lane;
  - Eastbound Approach: One shared left-through lane; and
  - Westbound Approach: One shared through-right turn lane.
- ***Eucalyptus Road & Craig Avenue (Not a study area intersection)*** – Construct the intersection with the following geometrics:
  - Northbound Approach: N/A;
  - Southbound Approach: One right turn lane;
  - Eastbound Approach: One left turn lane; and
  - Westbound Approach: N/A.

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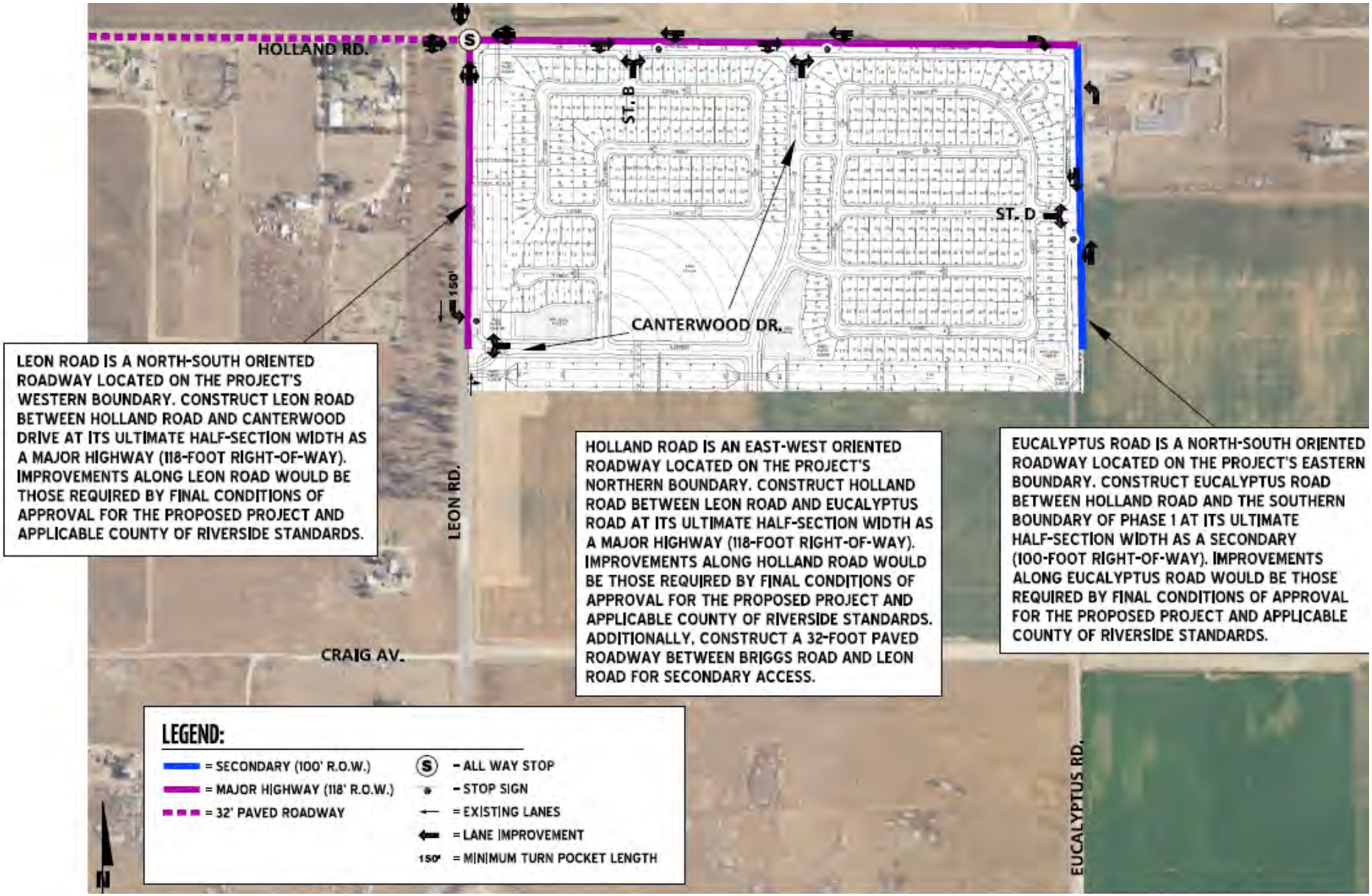
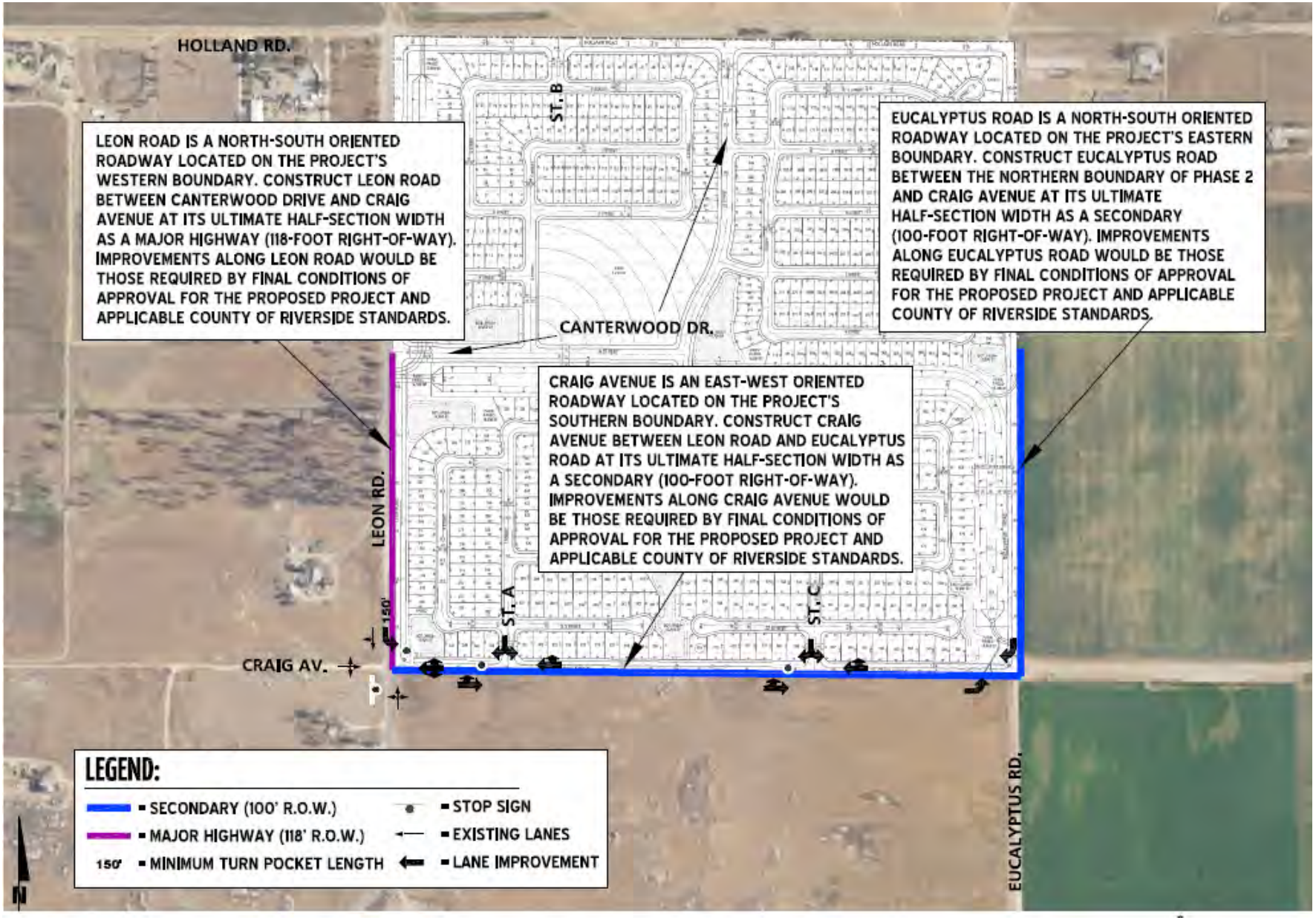
FIGURE 4.15-3
PHASE 1 (2021) SITE ADJACENT ROADWAY AND SITE ACCESS IMPROVEMENTS



Source: TIA (**Appendix K**)

FIGURE 4.15-4
PHASE 2 PROJECT BUILDOUT (2025) SITE ADJACENT ROADWAY AND SITE ACCESS IMPROVEMENTS



Source: TIA (**Appendix K**)

4.15.2 Environmental Setting

4.15.2.1 Existing Street Network

Pursuant to the agreement with County of Riverside staff (see Appendix 1.1 of the *TIA*), the study area includes a total of 19 existing and future intersections as shown previously on **Figure 4.15-2, *Location Map***. **Figure 4.15-5, *Existing Number of Through Lanes and Intersection Controls***, below, illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

4.15.2.2 General Plan Circulation Element

County of Riverside

Figure 4.15-6, *Riverside County General Plan Roadway Network* shows the adopted County of Riverside General Plan Roadway Network. **Figure 4.15-7, *Riverside County General Plan Roadway Cross-Sections*** illustrates the adopted County of Riverside General Plan roadway cross-sections.

City of Menifee

Figure 4.15-8, *City of Menifee General Plan Roadway Network* shows the City of Menifee General Plan Circulation Element, and **Figure 4.15-9, *City of Menifee General Plan Roadway Cross-Sections*** illustrates the City of Menifee General Plan roadway cross-sections.

Pedestrian and Bicycle Facilities

The Riverside County Trails and Bikeway System is shown on **Figure 4.15-10, *Riverside County Trails and Bikeway System***. Future planned regional trails are proposed along Holland Road and Eucalyptus Road. A community trail is proposed along Garbani Road to the west with a combination trail (Regional/Class I bike path) to the east. The Bikeways and Community Pedestrian Network for the City of Menifee are shown on **Figure 4.15-11, *City of Menifee Bikeway and Community Pedestrian Network***. Field observations conducted in January 2018 indicate nominal pedestrian and bicycle activity within the study area. Existing pedestrian facilities currently exist along portions of Scott Road, Holland Road, Menifee Road, Antelope Road and Zeiders Road. The existing pedestrian facilities within the study area are shown on **Figure 4.15-12, *Existing Pedestrian Facilities***.

Transit Service

The study area is currently served by the Riverside Transit Agency (RTA) with bus services along Antelope Road, Menifee Road and Scott Road via Route 61. RTA Route 208 has services along the I-215 Freeway. The transit services are illustrated on **Figure 4.15-13, *Existing Transit Routes***. The City of Menifee Proposed Transit Services are shown on **Figure 4.15-14, *City of Menifee Proposed Transit Services***. There are no existing transit routes that could potentially serve the Project. Transit service is reviewed and updated by the RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

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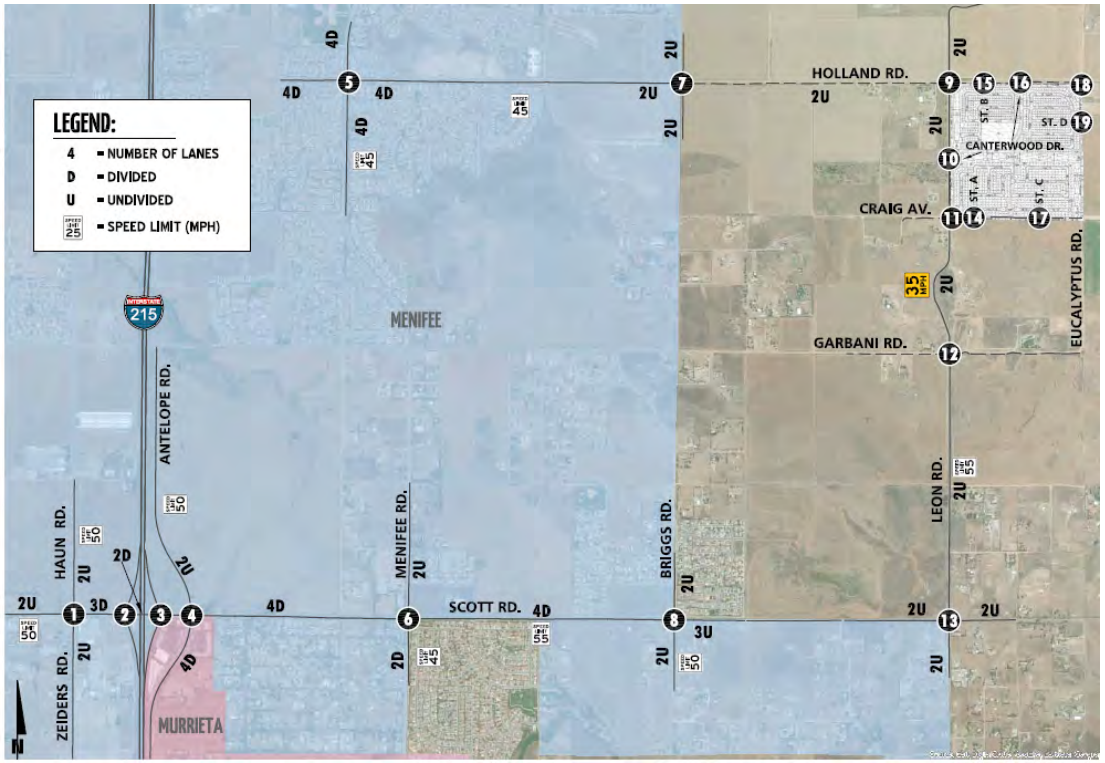
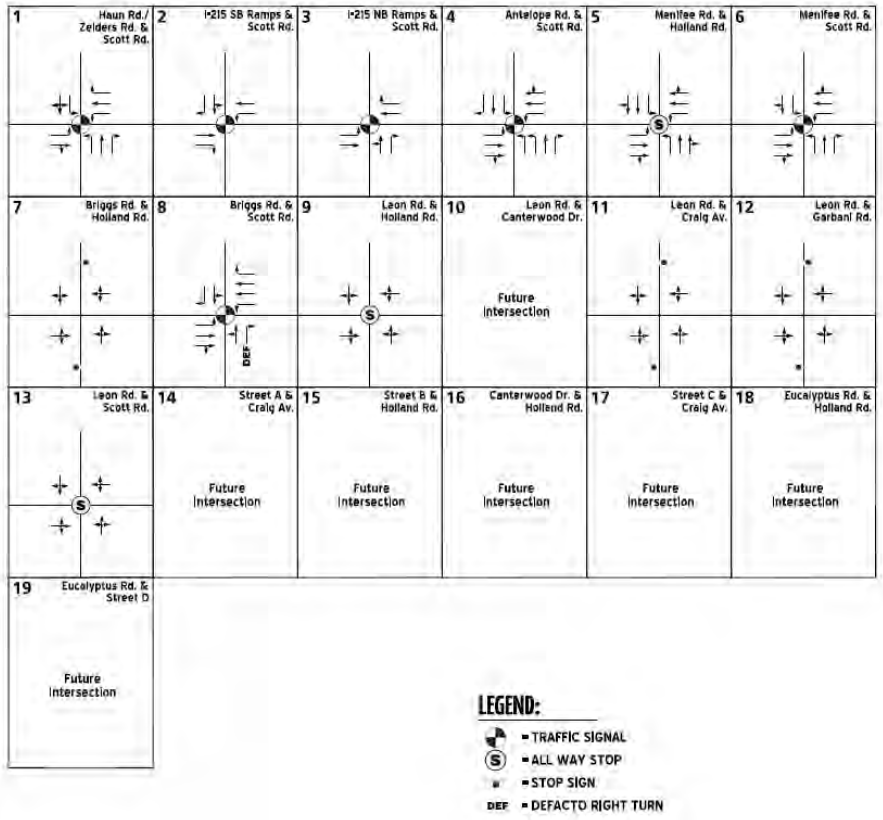
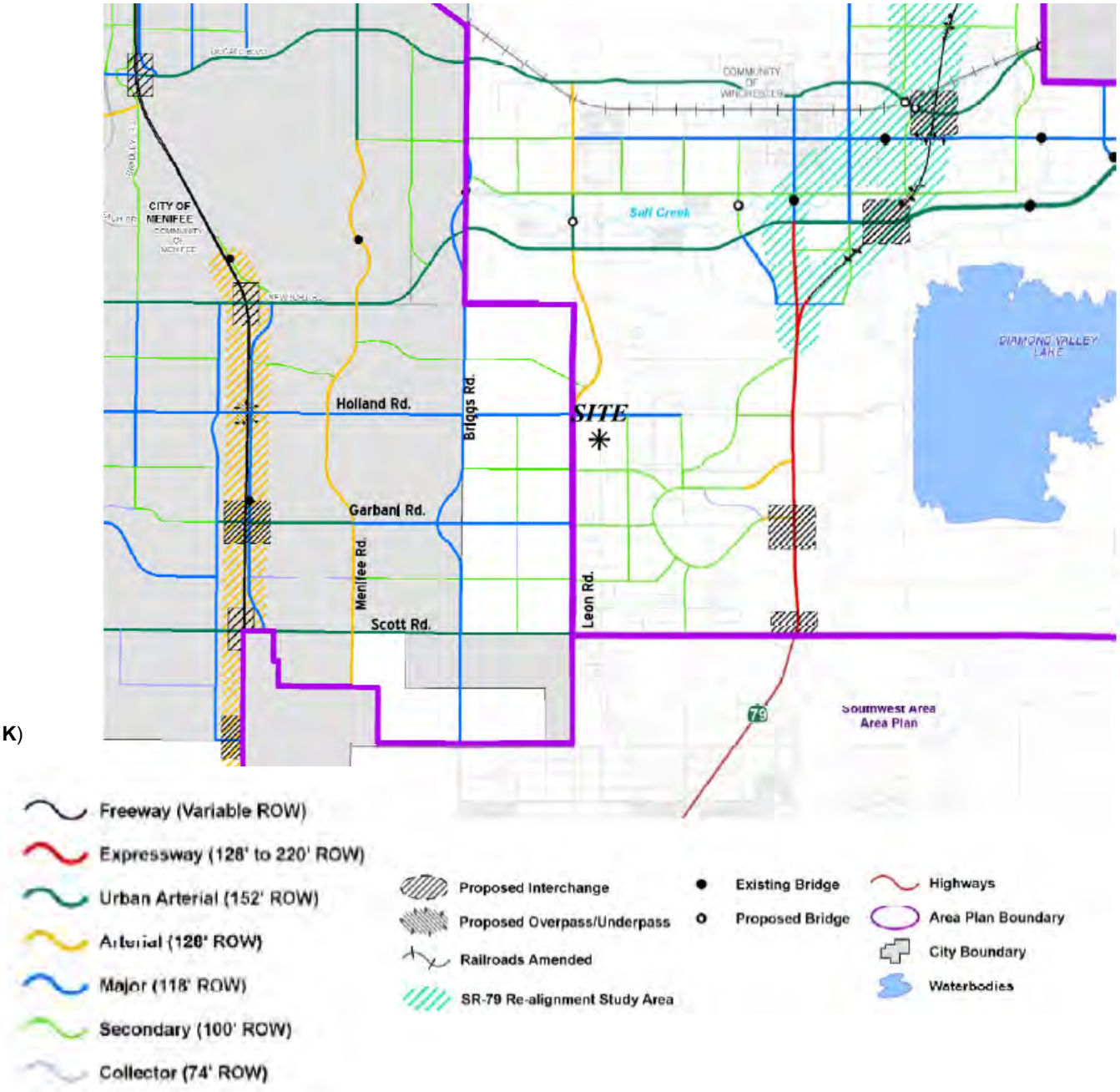
FIGURE 4.15-5
EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS





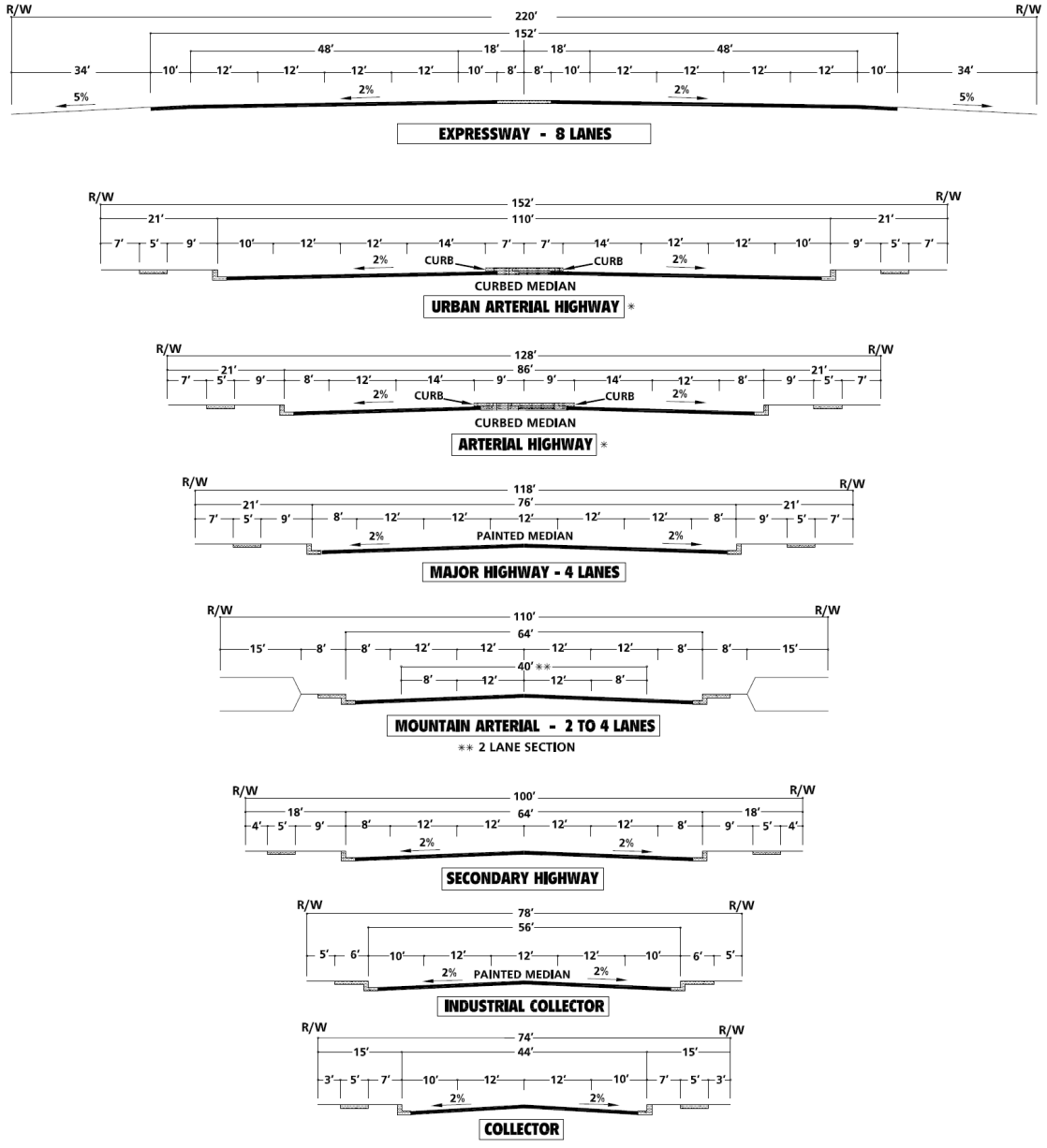
Source: TIA (**Appendix K**)

FIGURE 4.15-6
RIVERSIDE COUNTY GENERAL PLAN ROADWAY NETWORK



Source: TIA (**Appendix K**)

FIGURE 4.15-7
RIVERSIDE COUNTY GENERAL PLAN ROADWAY CROSS-SECTIONS



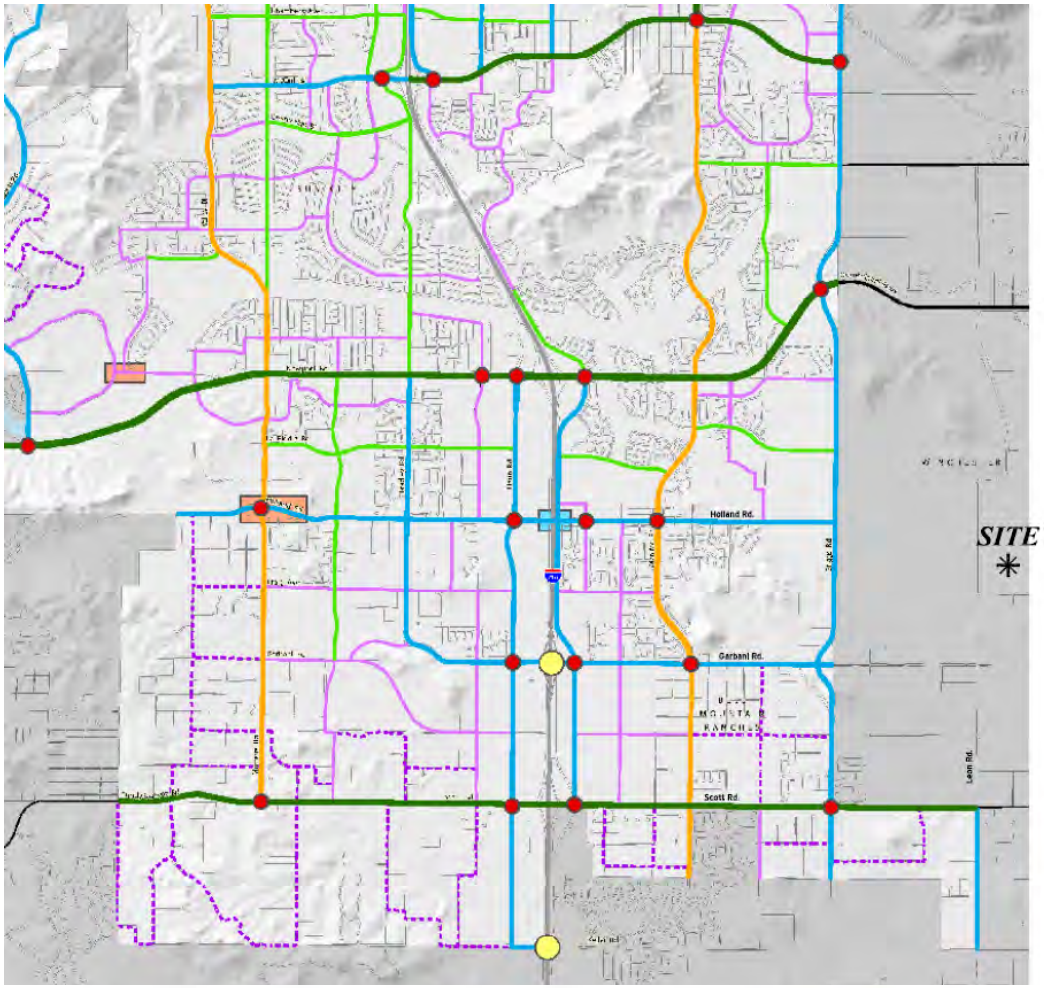
* *IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.*

Source: TIA (**Appendix K**)

NOT TO SCALE

SOURCE: COUNTY OF RIVERSIDE

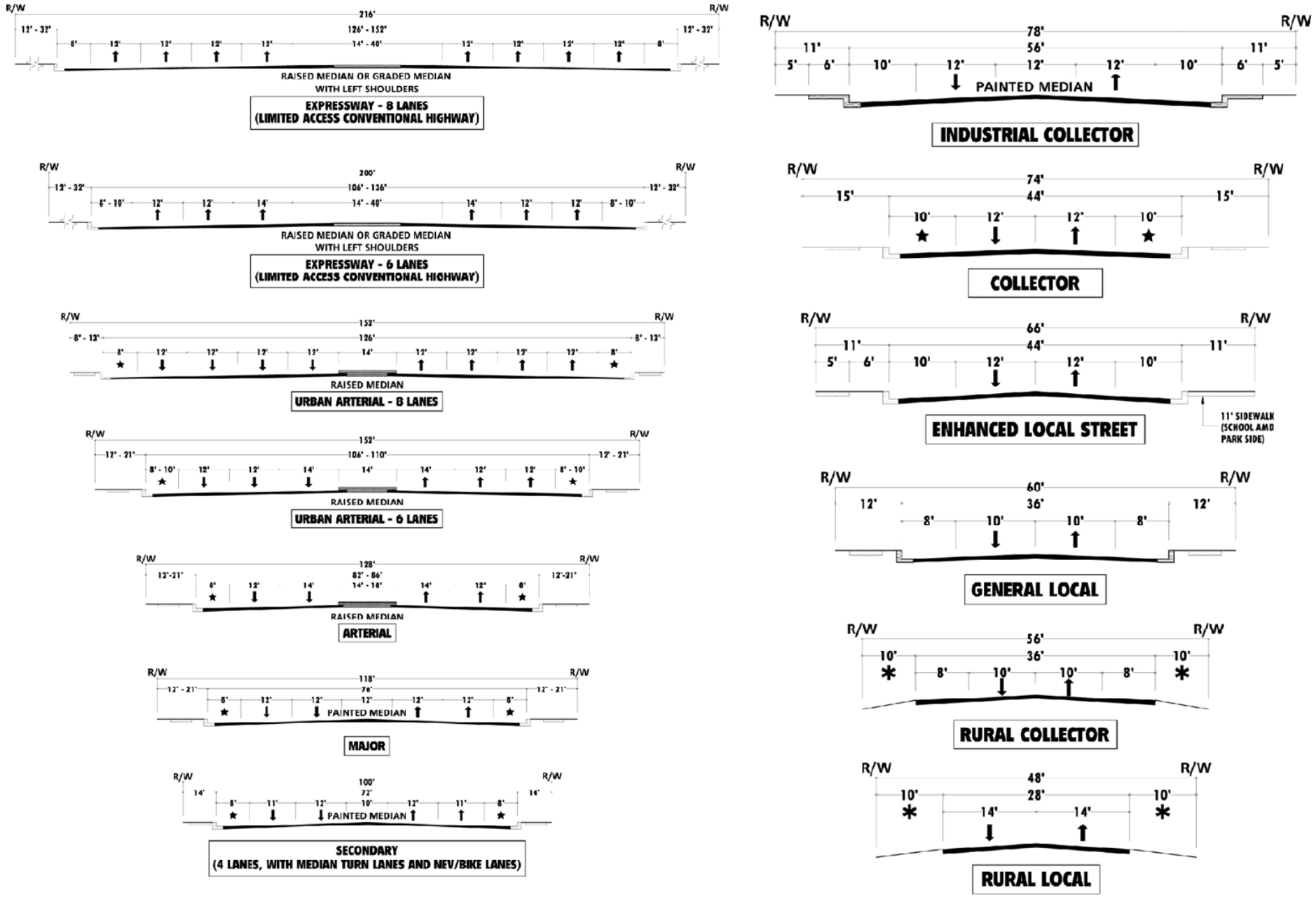
FIGURE 4.15-8
CITY OF MENIFEE GENERAL PLAN ROADWAY NETWORK



Source: TIA (**Appendix K**)

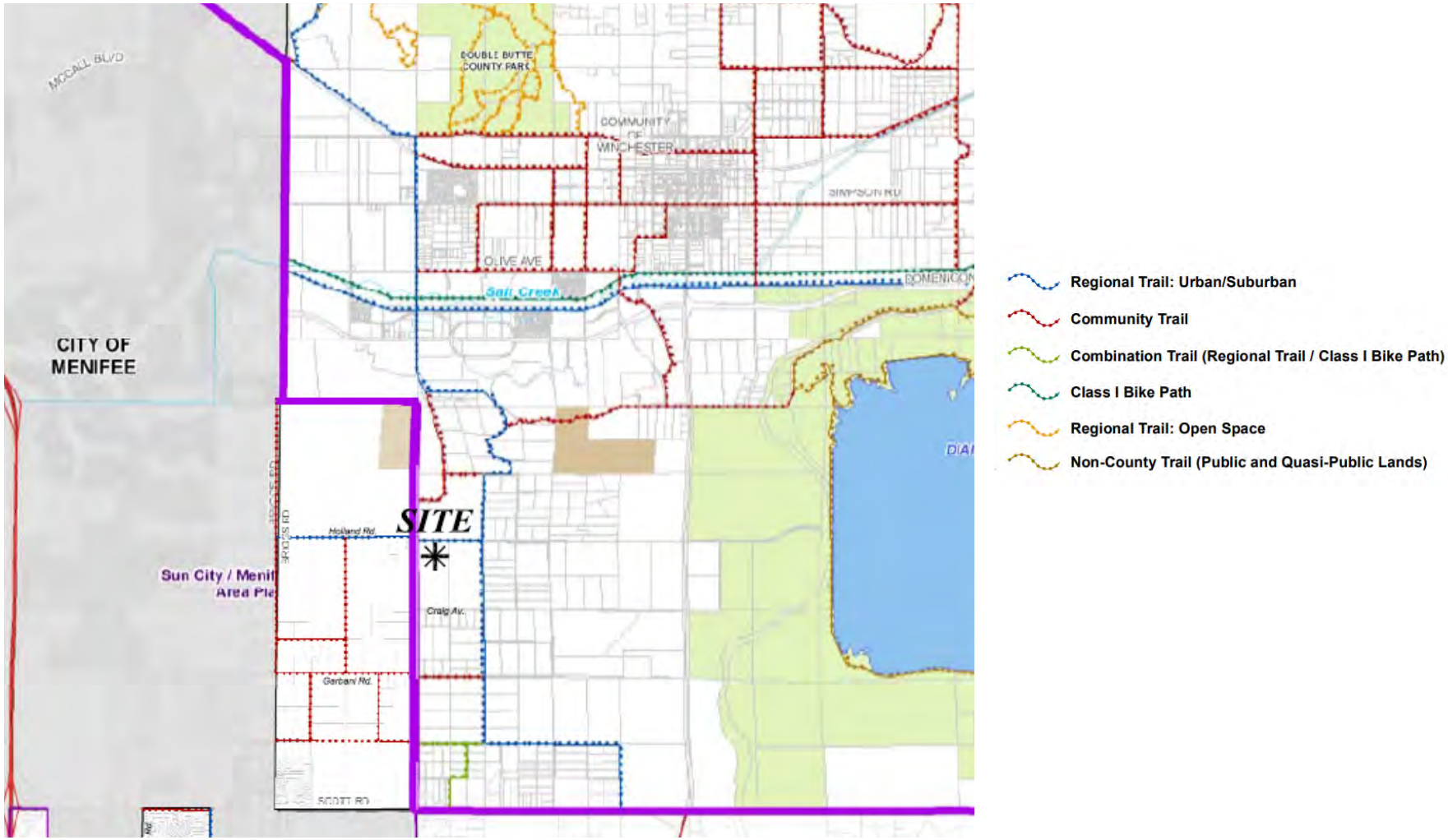
Expressway (6 to 8 Lanes, Divided)
Urban Arterial (6 Lanes, Divided)
Arterial (4 Lanes, Divided)
Major (4 Lanes, Divided)
Mountain Arterial (4 Lanes, Undivided)
Secondary (4 Lanes, Undivided)
Collector / Interconnected Local (2 Lanes)
Rural Collector / Interconnected Local (2 Lanes)
Future Freeway Interchange
Connectivity Analysis Zone - Roadway alignments, intersection geometrics and traffic control features subject to additional assessment
Future Freeway Overcrossing
Enhanced Intersection - Additional lanes / Right-of-Way required within 600 feet of the intersection

FIGURE 4.15-9
CITY OF MENIFEE GENERAL PLAN ROADWAY CROSS-SECTIONS



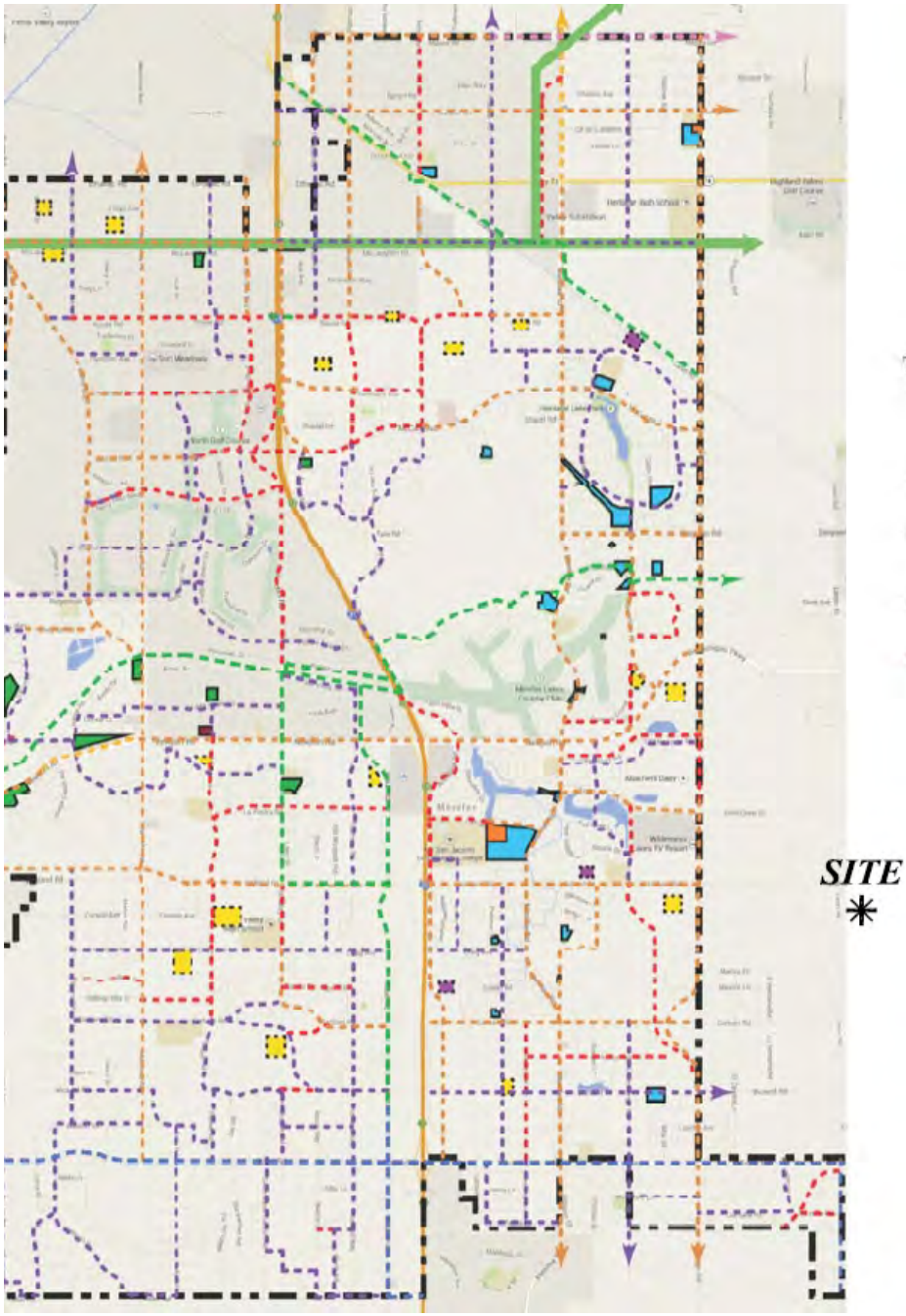
Source: TIA (**Appendix K**)

FIGURE 4.15-10
RIVERSIDE COUNTY TRAILS AND BIKEWAY SYSTEM



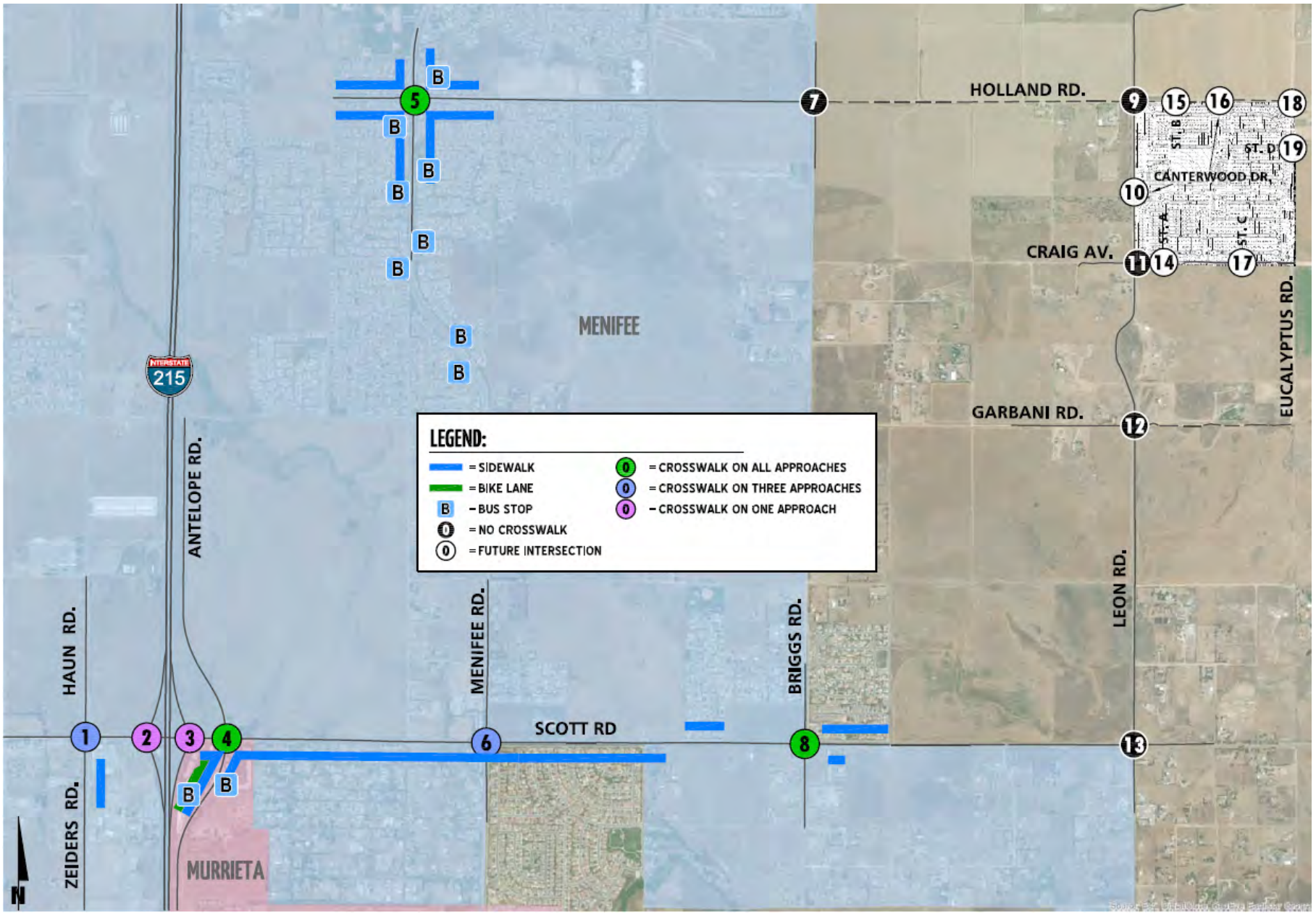
Source: TIA (**Appendix K**)

FIGURE 4.15-11
CITY OF MENIFEE BIKEWAY AND COMMUNITY PEDESTRIAN



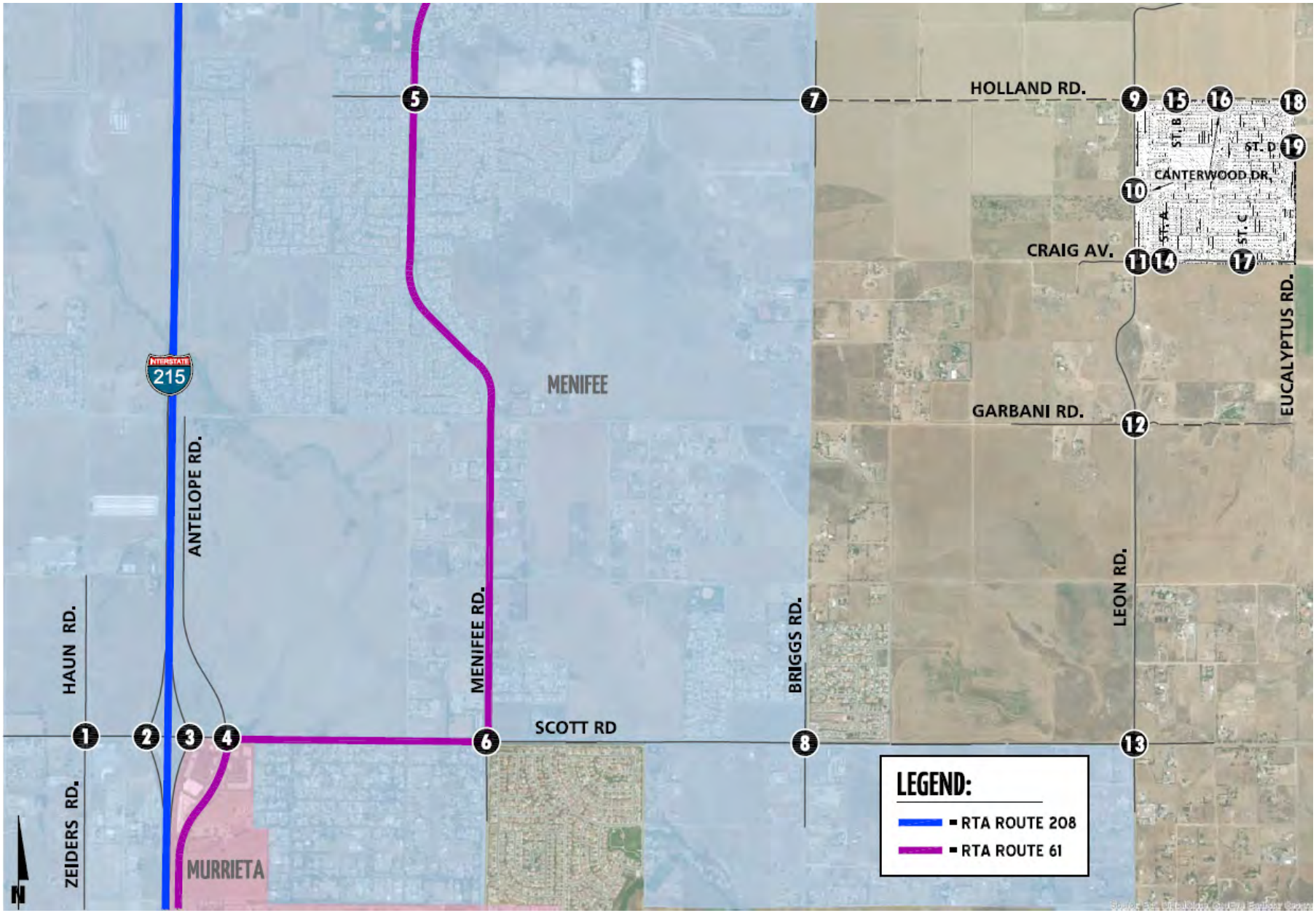
Source: TIA (**Appendix K**)

FIGURE 4.15-12
EXISTING PEDESTRIAN FACILITIES



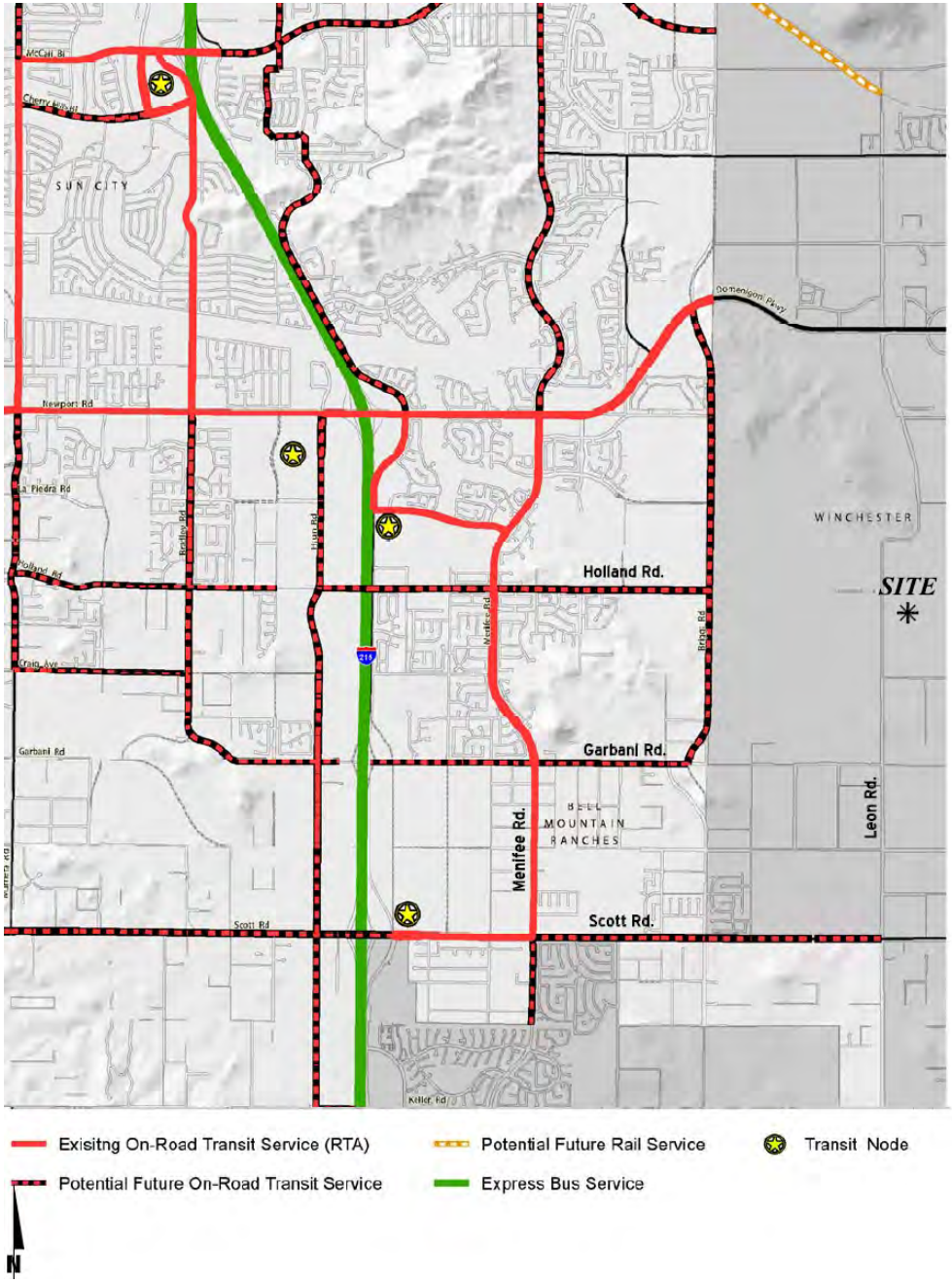
Source: TIA (**Appendix K**)

FIGURE 4.15-13
EXISTING TRANSIT ROUTES



Source: TIA (**Appendix K**)

FIGURE 4.15-14
CITY OF MENIFEE PROPOSED TRANSIT SERVICES



Source: TIA (**Appendix K**)

Existing Traffic Counts

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in January 2018. The following peak hours were selected for analysis:

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

The weekday AM and PM peak hour count data are representative of typical peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1 if the *TIA*. These raw turning volumes have been flow conserved between intersections with limited access, no access and where there are currently no uses generating traffic.

Existing weekday ADT volumes on arterial highways throughout the study area are shown on **Figure 4.15-15, *Existing (2018) Average Daily Traffic***. Existing ADT volumes are based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 8.28 = Leg Volume

For those roadway segments which have 24-hour tube count data available in close proximity to the study area, a comparison between the PM peak hour and daily traffic volumes indicated that the peak-to-daily relationship of approximately 12.07 percent would sufficiently estimate ADT volumes for planning-level analyses. As such, the above equation utilizing a factor of 8.28 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 12.07 percent (i.e., 1/0.1207 = 8.28). Existing weekday AM and PM peak hour intersection volumes are shown on **Figure 4.15-16, *Existing (2018) Traffic Volumes***.

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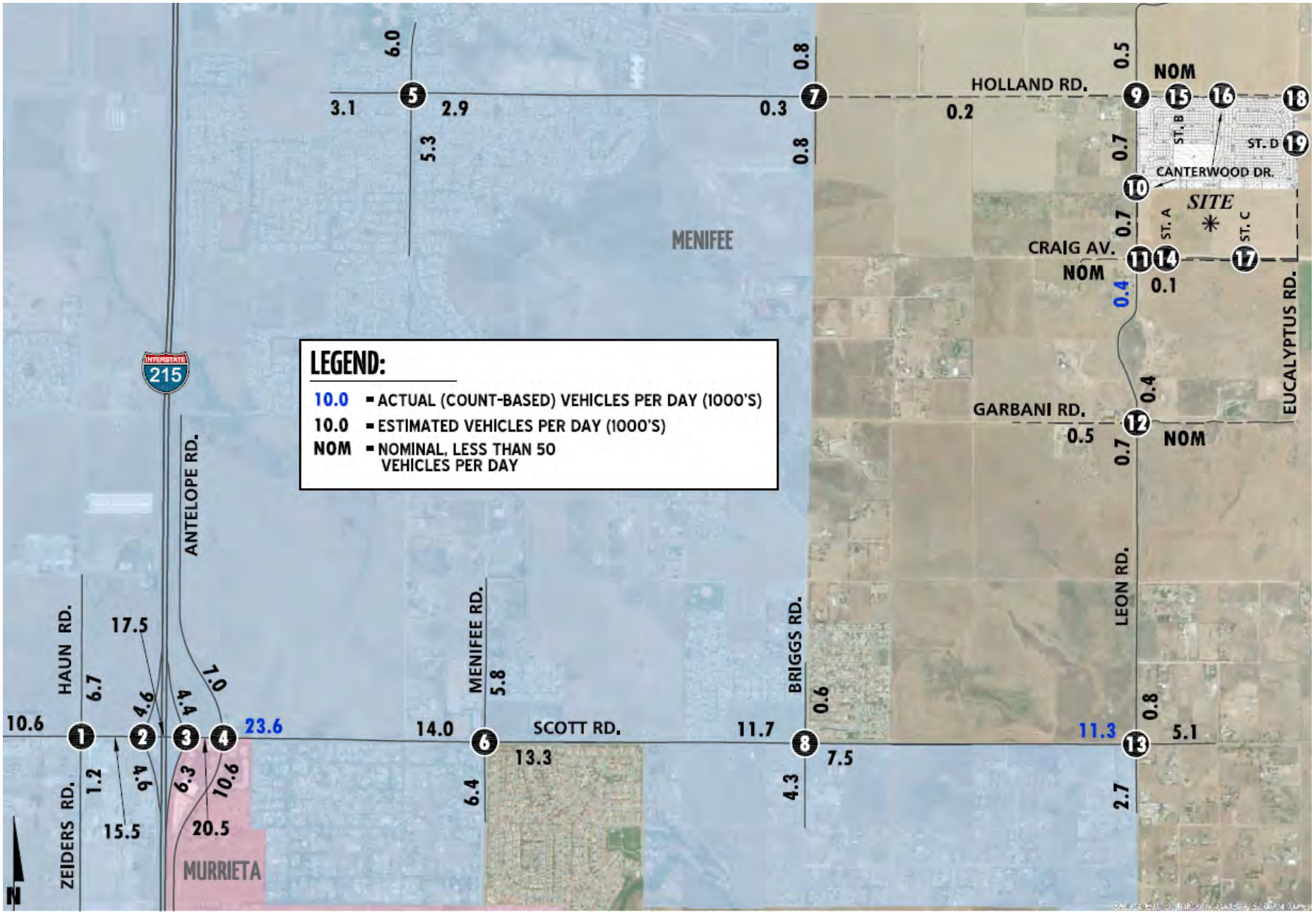
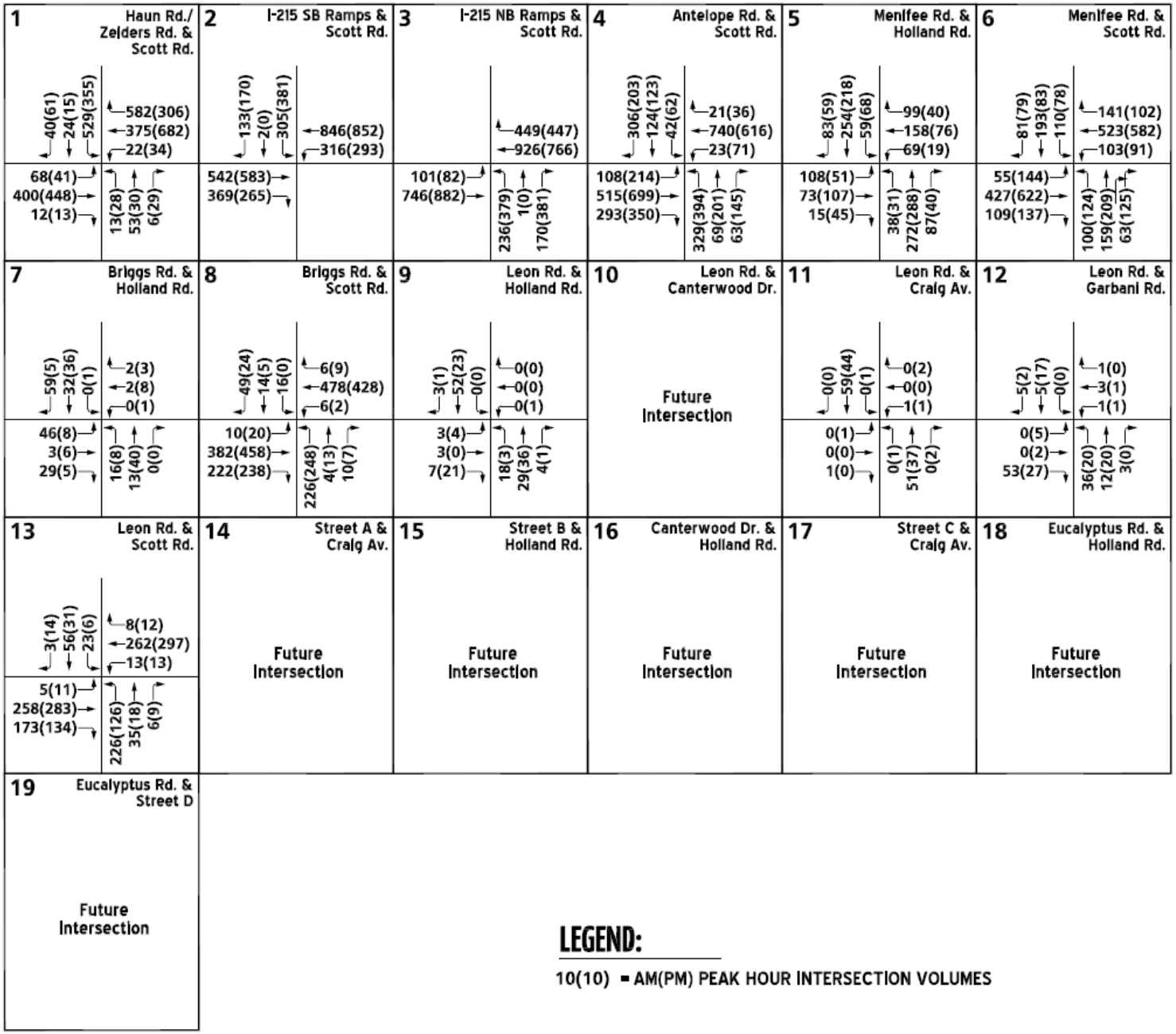
FIGURE 4.15-15
EXISTING (2018) AVERAGE DAILY TRAFFIC



Source: TIA (**Appendix K**)

FIGURE 4.15-16
EXISTING (2018) TRAFFIC VOLUMES



Source: TIA (**Appendix K**)

Existing Conditions Intersection Operations Analysis

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 4.15.1.2. The intersection operations analysis results are summarized in **Table 4.15-8, *Intersection Analysis for Existing (2018) Conditions***, which indicates that all of the existing study area intersections are currently operating at an acceptable LOS during the peak hours, with the exception of the following intersection:

- Briggs Rd. & Scott Rd. (#8) – LOS F AM peak hour only.

This is an existing deficiency and will require the intersection to accommodate a dedicated left turn lane and shared right through lane. This existing deficiency will be utilized as part of the Project's baseline for analysis purposes.

Table 4.15-8
Intersection Analysis for Existing (2018) 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	Haun Rd./Zeiders Rd. / Scott Rd.	TS	1	1	1	1	1	0	1	1	0	1	1	1	44.6	43.8	D	D
2	I-215 SB Ramps / Scott Rd.	TS	0	0	0	0	1	1	0	1	1	1	1	0	LOS E/F[4]			
3	I-215 NB Ramps / Scott Rd.	TS	0	1	1	0	0	0	1	1	0	0	1	1	LOS E/F[4]			
4	Antelope Rd. / Scott Rd.	TS	2	1	1	1	1	1	1	2	0	1	2	0	35.1	35.7	D	D
5	Menifee Rd. / Holland Rd.	AWS	1	2	0	1	2	0	1	2	0	1	2	0	17.9	11.6	C	B
6	Menifee Rd. / Scott Rd.	TS	1	1	1	1	1	0	1	2	0	1	2	0	32.1	34.5	C	C
7	Briggs Rd. / Holland Rd.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	10.3	9.5	B	A
8	Briggs Rd. / Scott Rd.	TS	0	1	d	0	1	1	1	2	0	1	2	1	**186.6**	29.5	**F**	C
9	Leon Rd. / Holland Rd.	AWS	0	1	0	0	1	0	0	1	0	0	1	0	7.3	7.2	A	A
10	Leon Rd. / Canterwood Dr.		Future Analysis Location															
11	Leon Rd. / Craig Av.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	9.8	9.3	A	A
12	Leon Rd. / Garbani Rd.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	9.5	9.6	A	A
13	Leon Rd. / Scott Rd.	AWS	0	1	0	0	1	0	0	1	0	0	1	0	16.5	14.5	C	B
14	St. A / Craig Av.		Future Analysis Location															
15	St. B / Holland Rd.		Future Analysis Location															
16	Canterwood Dr. / Holland Rd.		Future Analysis Location															
17	St. C / Craig Av.		Future Analysis Location															
18	Eucalyptus Rd. / Holland Rd.		Future Analysis Location															
19	Eucalyptus Rd. / St. D		Future Analysis Location															

BOLD = LOS does not meet the County, City of Menifee, City of Murrieta, or Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

[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

[2] Per the Highway Capacity Manual 6, 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 movement sharing a single lane) are shown.

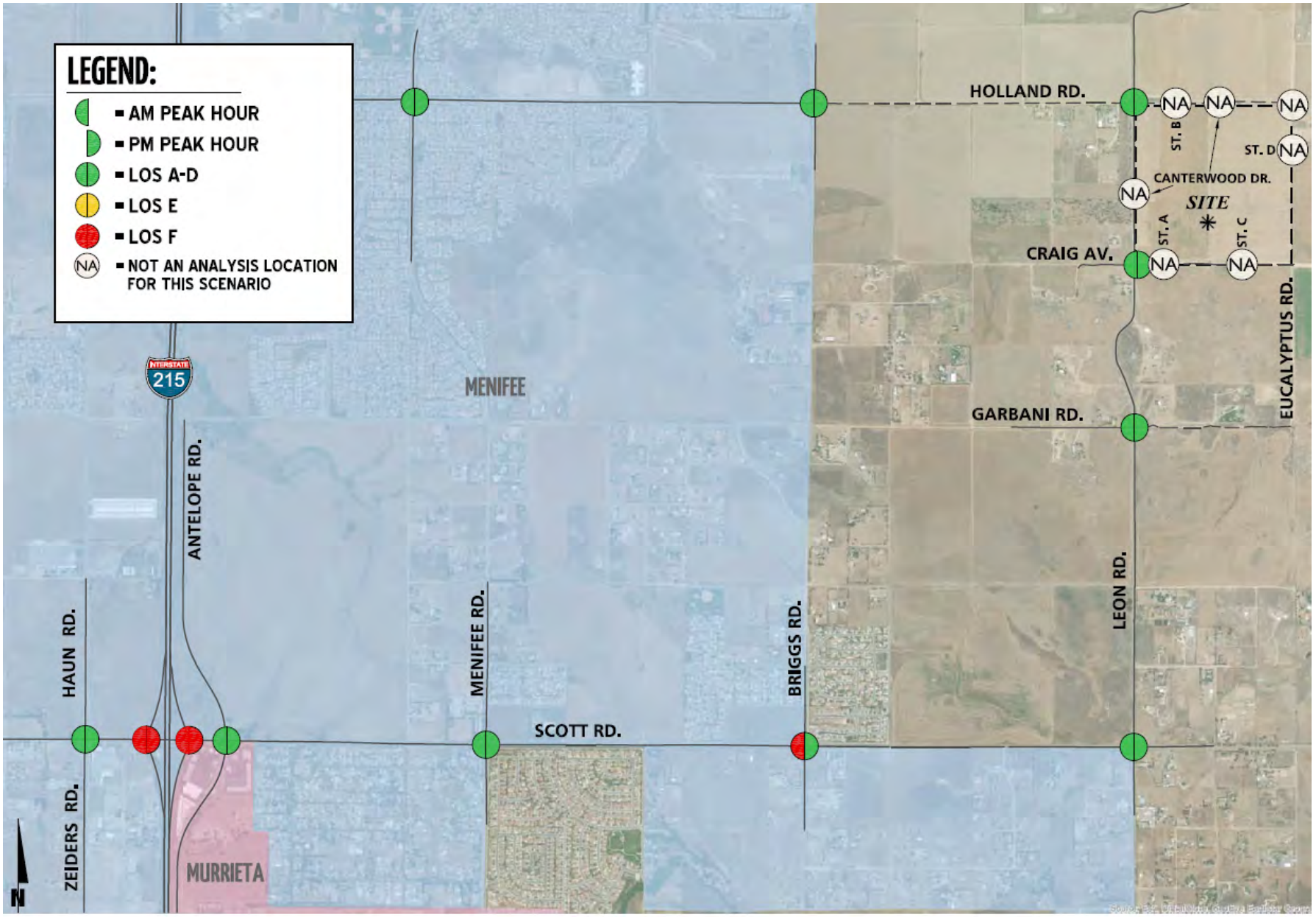
[3] TS = Traffic Signal; AWS = All-way Stop; CSS = Cross-street Stop.

[4] Based on the constrained traffic count data, the intersection appears to operate at acceptable LOS or at LOS better than field observations would suggest. However, field observations show that the intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations

Consistent with **Table 4.15-8**, a summary of the peak hour intersection LOS for Existing

conditions is shown on **Figure 4.15-17, *Existing (2018) Summary of LOS***. The intersection operations analysis worksheets are included in Appendix 3.2 of the *TIA*.

FIGURE 4.15-17
EXISTING (2018) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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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 Antelope Road at Scott Road and the I-215 Ramps locations at the Scott Road interchange 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 or at LOS better than field observations would suggest. Field observations show that these intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations.

Existing Conditions Off-Ramp Queuing Analysis

A queuing analysis was performed for southbound and northbound off-ramps at the I-215 Freeway Scott Road interchange to assess vehicle queues for the off ramps that may potentially impact 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 4.15-9, *Peak Hour Freeway Off-Ramp Queuing Analysis for Existing (2018) Conditions***, below. 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 4.15-9**, there are no existing queuing issues. Worksheets for Existing conditions off-ramp queuing analysis are provided in Appendix 3.3 of the *TIA*.

Table 4.15-9
Peak Hour Freeway Off-Ramp Queuing Analysis for Existing (2018) Conditions

Intersection	Movement	Stacking (Feet)	95th Percentile Stacking Distance Required (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Scott Road						
	SBL/T	1,300	347 [2]	423 [2]	Yes	Yes
	SBR	460	49	52	Yes	Yes
I-215 NB Off-Ramp / Scott Road						
	NBL/T	1,560	276 [2]	399 [2]	Yes	Yes
	NBR	400	59	250	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.

Existing Conditions Traffic Signal Warrants Analysis

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. For Existing traffic conditions, a traffic signals are currently be warranted at the following unsignalized study area intersections (see Appendix 3.4 if the *TIA*):

- Menifee Rd. & Holland Rd. (#5); and
- Leon Rd. & Scott Rd. (#13).

This existing deficiency will be utilized as part of the Project's baseline for analysis purposes.

Existing Conditions Basic Freeway Segment Analysis

Existing mainline directional volumes for the weekday AM and PM peak hours are provided on **Figure 4.15-18, *Existing (2018) Freeway Mainline Volumes***.

FIGURE 4.15-18
EXISTING (2018) FREEWAY MAINLINE VOLUMES

Source: TIA (**Appendix K**)

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As shown on **Table 4.15-10, *Basic Freeway Segment Analysis for Existing (2018) Conditions*** I-215 Freeway segments analyzed for this study were found to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours, with the exception of the following segments:

- I-215 Freeway Southbound – North of Scott Road (#1) – LOS E AM peak hour only
- I-215 Freeway Southbound – South of Scott Road (#2) – LOS E AM peak hour only

Table 4.15-10
Basic Freeway Segment Analysis for Existing (2018) Conditions

Freeway	Direction	Mainline Segment	Lanes[1]	Volume[2]		Density[3]		LOS[4]	
				AM	PM	AM	PM	AM	PM
I-215 Freeway	Southbound	North of Scott Road	3	6,220	5,302	**41.8**	31.9	**E**	D
		South of Scott Road	3	6,467	5,309	**44.6**	31.9	**E**	D
	Northbound	North of Scott Road	3	3,387	5,147	18.3	29.6	C	D
		South of Scott Road	3	3,243	5,378	17.4	31.7	B	D

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Directional volumes based on current PeMS data.
[3] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[4] LOS = Level of Service

Existing basic freeway segment analysis worksheets are provided in Appendix 3.5 of the *TIA*.

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 4.15-11**, ***Freeway Ramp Merge/Diverge Analysis for Existing (2018) Conditions***. As shown in **Table 4.15-11**, the I-215 Freeway ramp merge/diverge areas analyzed for this study currently operate at LOS D or better, with the exception of the following areas:

- I-215 Freeway – Southbound, Off-Ramp at Scott Road (#1) – LOS E AM peak hour only; and
- I-215 Freeway – Southbound, On-Ramp at Scott Road (#2) – LOS E AM peak hour only.

Table 4.15-11
Freeway Ramp Merge/Diverge Analysis for Existing (2018) Conditions

Freeway	Direction	Ramp Junction	Lanes on Freeway	AM Peak Hour		PM Peak Hour	
				Density[1]	LOS[2]	Density[1]	LOS[2]
I-215 Freeway	Southbound	Off-Ramp at Scott Road	3	**36.3**	**E**	31.2	D
		On-Ramp at Scott Road	3	**43.4**	**E**	33.3	D
	Northbound	On-Ramp at Scott Road	3	20.5	C	31.7	D
		Off-Ramp at Scott Road	3	18.9	C	32.0	D

Existing freeway ramp merge/diverge operations analysis worksheets are provided in Appendix 3.6 of the *TIA*.

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the Existing (2018) deficiencies on the SHS. This existing deficiency will be utilized as part of the Project's baseline for analysis purposes.

4.15.2.1 Regulatory Framework

State and local laws, regulations, plans or guidelines that are potentially applicable to this analysis are summarized in this section.

4.15.2.1.a State

California Assembly Bill 32 (2006) and Senate Bill 375 (2008)

Assembly Bill 32, the Global Warming Solutions Act of 2006 (AB 32), is the primary state policy created with the purpose of reducing greenhouse gas emissions in California. AB 32 created emissions reduction targets and granted authority over emissions reduction to the California Air Resources Board (CARB). Senate Bill 375, the Sustainable Communities and Climate Protection Act of 2008 (SB 375), which was passed by the legislature as a tool for working towards AB 32's reduction goals, requires CARB to set regional greenhouse gases (GHG) emissions targets and requires each California metropolitan planning organizations to develop a Sustainable Community Strategy (SCS) that integrates housing, transportation, and land use policy. These mandates were designed with the intention of reducing vehicle miles traveled, and thus, GHG emissions. Additionally, the CARB Scoping Plan outlines ways to achieve GHG reductions in California as required by AB 32.

AB 1358 California Complete Streets Act of 2008

The Complete Street Act of 2008 (Assembly Bill 1358) was developed in response to and in support of other legislation aimed at reducing vehicle emissions through reduced trip length and frequency combined with changes in land use policies. The bill includes several key provisions including a requirement that the state amend guidelines to show how "appropriate accommodation varies depending on its transportation and land use context." Reducing vehicle miles travelled and enabling short trips in an automobile to be replaced by biking, walking, neighborhood electric vehicles NEVs/golf carts, and use of public transit is the goal. Ultimately, a well-balanced transportation system can move more people (rather than vehicles) efficiently and at a reasonable cost.

The Complete Streets Act is supported by Caltrans Deputy Directive DD-64-R1. DD-64-R1 memorializes the importance of pedestrian and bicycle facilities to the state's transportation system and outlines responsibilities for Caltrans employees to ensure that travelers of all ages and abilities can move safely and efficiently along and across a network of complete streets throughout the state.

4.15.2.1.b Regional

The Regional Transportation Plan

On April 4, 2012, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. The 2012–2035 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the Federal Clean Air Act. The 2012–2035 RTP/SCS contains a regional commitment for the broad deployment of zero- and near-zero emission transportation technologies in the 2023–2035 time frame and clear steps to move toward this objective.

The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

This RTP/SCS achieves greenhouse gas emission-reduction targets set by CARB by achieving a 9 percent reduction by 2020 and 17 percent reduction by 2035 compared to the 2005 level on a per capita basis. This air quality benefit is made possible largely by more sustainable planning, integrating transportation and land use decisions to allow Southern Californians to live closer to where they work and play and to high-quality transit service. As a result, more residents will be able to use transit and active transportation as a safe and attractive means of travel.

Western Riverside County Non-Motorized Transportation Plan

The Western Riverside Council of Governments (WRCOG) adopted a Non-Motorized Transportation Plan (NMTP) in 2010. The NMTP includes a system of regional routes through western Riverside County, including the City of Menifee. Although the NMTP is non-binding to participating agencies, the plan consolidated adopted bike plans where available and created a recommended system of supporting routes to connect systems to each other and serve as regional non-motorized transportation backbone. The NMTP included four routes that directly serve Menifee and connect to neighboring jurisdictions. These regionally significant routes were identified in the NMTP as follows:

- Route 15: Future Class I bike path along Salt Creek with an eastern connection to the City of Hemet and a western connection to the City of Lake Elsinore.
- Route 19: Future Class II bike lane along Scott Road/Bundy Canyon Road Connecting to Mission Trail in the City of Lake Elsinore and Washington Street in French Valley.
- Route 23: Future Class II bike lane along Bradley Road/Holland Road/Haun Road with a northern terminus at Salt Creek in the City of Menifee and connecting to the City of Murrieta at Keller Road/Antelope Road.
- Route 24: Future Class II bike lane along Matthews Road connecting to the City of Perris at Case Road and County of Riverside at Leon Road.

4.15.2.1.c County of Riverside

Riverside County General Plan Circulation Element

Since incorporation of the City in 2008, the County of Riverside's General Plan Circulation Element has been utilized for the purposes of providing a transportation framework. The County's Circulation Element was adopted in 2003 through the Riverside County Integrated Project (RCIP). The RCIP represented a comprehensive planning process to determine future placement of buildings, roads, and open spaces for Riverside County. The purpose of the RCIP was to create plans that are coherent and consistent for transportation, land use, and the environment.

The adopted RCIP roadway network provides the basis for the developing the City of Menifee General Plan roadway network. This is critical since any changes to the roadway classifications and/or cross-sections will impact future development within the City. The General Plan roadway network defines the right-of-way dedications and capacity requirements needed to support buildout of proposed General Plan land uses. Figure 5.17-3 of the *GPEIR* shows the RCIP roadway network adopted in the County of Riverside General Plan Circulation Element in 2003.

Riverside County Congestion Management Program

The CMP in effect in Riverside County was approved by the RCTC in 2010. All freeways and selected arterial roadways in the county are designated elements of the CMP system of highways and roadways. There are two CMP system roadways in proximity of the Project, I-215 and SR-74. Riverside County Transportation Commission (RCTC) has adopted a minimum LOS threshold of LOS "E" for CMP facilities.

Ordinance No. 824, Transportation Uniform Mitigation Fee (TUMF)

The Transportation Uniform Mitigation Fee (TUMF) program is administered by the Western Riverside Council of Governments (WRCOG) based upon a regional Nexus Study most recently updated in 2016 to address major changes in right of way acquisition and improvement cost factors. 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. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County, except the City of Beaumont.

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 February. 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.

Payment of the TUMF is required and is not considered unique mitigation under CEQA (reference **Standard Condition SC-TR-1**, in Section 4.15.5). TUMF roadways in the City, in proximity of the Project site include: Briggs Road, Newport Road, Scott Road and Menifee Road. TUMF bridge improvements in the City of Menifee, in proximity of the Project site include: Holland Road and Briggs Road at Newport Road. Credits may be afforded to the applicant if improvements are made to these facilities as part of the Project development.

Ordinance No. 659, Development Impact Fees

The Project is located within the County's Southwest Area Plan and therefore will be subject to County of Riverside DIF in an effort by the County to address development throughout its unincorporated area. The DIF program consists of two separate transportation components: the Roads, Bridges and Major Improvements component and the Traffic Signals component. Eligible facilities for funding by the County DIF program are identified on the County's Public Needs List, which currently extends through the year 2010. A comprehensive review of the DIF program is now planned in order to update the nexus study. This will result in development of a revised "needs list" extending the program time horizon from 2010 to 2030.

The cost of signalizing DIF network intersections is identified under the Traffic Signals component of the DIF program. County staff generally defines DIF eligible intersections as those consisting of two intersecting general plan roadways. If the intersection meets this requirement, it is potentially eligible for up to $235,000 of credit, which is subject to negotiations with the County.

Payment of the DIF is required and is not considered unique mitigation under CEQA (reference **Standard Condition SC-PS-1**, in Section 4.15.5).

Applicable General Plan Circulation Element, HVWAP and SCMVAP Goals and/or Policies

- **Policy Circulation 1.4** Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.
- **Policy Circulation 1.7** Encourage and support the development of projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented

retail and activity centers, dedicated bicycle lanes and paths, and mixed-use community centers.

- **Policy Circulation 2.1** The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan (Figure C-1) which are currently County maintained, or are intended to be accepted into the County maintained roadway system: LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans:REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans. LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans. LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed. Notwithstanding the forgoing minimum LOS targets, the Board of Supervisors may, on occasion by virtue of their discretionary powers, approve a project that fails to meet these LOS targets in order to balance congestion management considerations in relation to benefits, environmental impacts and costs, provided an Environmental Impact Report, or equivalent, has been completed to fully evaluate the impacts of such approval. Any such approval must incorporate all feasible mitigation measures, make specific findings to support the decision, and adopt a statement of overriding considerations. (AI 3)
- **Policy Circulation 2.2** Require that new development prepare a traffic impact analysis as warranted by the Riverside County Traffic Impact Analysis Preparation Guidelines or as approved by the Director of Transportation. Apply level of service targets to new development per the Riverside County Traffic Impact Analysis Preparation Guidelines to evaluate traffic impacts and identify appropriate mitigation measures for new development. (AI 3)
- **Policy Circulation 2.3** Traffic studies prepared for development entitlements (tracts, plot plans, public use permits, conditional use permits, etc.) shall identify project-related traffic impacts and determine the significance of such impacts in compliance with CEQA and the Riverside County Congestion Management Program Requirements.
- **Policy Circulation 2.4** The direct project-related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service targets.
- **Policy Circulation 2.5** The cumulative and indirect traffic impacts of development may be mitigated through the payment of various impact mitigation fees such as County Development Impact Fees, Road and Bridge Benefit District Fees, and Transportation Uniform Mitigation Fees to the extent that these programs provide funding for the improvement of facilities impacted by development.
- **Policy Circulation 2.6** Accelerate the construction of transportation infrastructure in the Highway 79 corridor between Temecula, Hemet, San Jacinto, and Banning. The County of Riverside shall require that all new development projects demonstrate adequate transportation infrastructure capacity to accommodate the added traffic growth. The County of Riverside shall coordinate with cities in the Highway 79 corridor to accelerate the usable revenue flow of existing funding programs, thus expediting the development of the transportation infrastructure.

- **Policy Circulation 2.7/SCMVAP 1.2** Maintain a program to reduce overall trip generation in the Highway 79 Policy Area (Figure C-2) by creating a trip cap on residential development within this policy area which would result in a net reduction in overall trip generation of 70,000 vehicle trip per day from that which would be anticipated from the General Plan Land Use designations as currently recommended. The policy would generally require all new residential developments proposals within the Highway 79 Policy Area to reduce trip generation proportionally, and require that residential projects demonstrate adequate transportation infrastructure capacity to accommodate the added growth.
- **Policy Circulation 2.8** Riverside County shall coordinate with Caltrans, RCTC and adjacent local jurisdictions in conformance with the Riverside County Congestion Management Program to determine the appropriate LOS threshold for determining significance when reviewing development proposals that directly impact nearby State Highway facilities or city streets.
- **Policy Circulation 3.5** Require all major subdivisions to provide adequate collector road networks designed to feed traffic onto General Plan-designated highways.
- **Policy Circulation 3.6** Require private developers to be primarily responsible for the improvement of streets and highways that serve as access to developing commercial, industrial, and residential areas. These may include road construction or widening, installation of turning lanes and traffic signals, and the improvement of any drainage facility or other auxiliary facility necessary for the safe and efficient movement of traffic or the protection of road facilities.
- **Policy Circulation 3.10** Require private and public land developments to provide all on-site auxiliary facility improvements necessary to mitigate any development-generated circulation impacts. A review of each proposed land development project shall be undertaken to identify project impacts to the circulation system and its auxiliary facilities. The Transportation Department may require developers and/or subdividers to provide traffic impact studies prepared by qualified professionals to identify the impacts of a development.
- **Policy Circulation 4.1** Provide facilities for the safe movement of pedestrians within developments, as specified in the County Ordinances Regulating the Division of Land of the County of Riverside.
- **Policy Circulation 4.2** Maximize visibility and access for pedestrians and encourage the removal of barriers (walls, easements, and fences) for safe and convenient movement of pedestrians. Special emphasis should be placed on the needs of disabled persons considering Americans with Disabilities Act (ADA) regulations.
- **Policy Circulation 4.3** Assure and facilitate pedestrian access from developments to existing and future transit routes and terminal facilities through project design.
- **Policy Circulation 4.4** Plan for pedestrian access that is consistent with road design standards while designing street and road projects. Provisions for pedestrian paths or sidewalks and timing of traffic signals to allow safe pedestrian street crossing shall be included.
- **Policy Circulation 4.6** Consult the County Transportation Department as part of the development review process regarding any development proposals where pedestrian facilities may be warranted. The County of Riverside may require both the dedication and improvement of the pedestrian facilities as a condition of development approval.
- **Policy Circulation 4.7** Make reasonable accommodation for safe pedestrian walkways that comply with the Americans with Disabilities Act (ADA) requirements within commercial, office, industrial, mixed use, residential, and recreational developments.
- **Policy Circulation 4.8** Coordinate with all transit operators to ensure that pedestrian facilities are provided along and/or near all transit routes, whenever feasible. New land developments may be required to provide pedestrian facilities due to existing or future

planned transit routes even if demand for pedestrian facility is not otherwise warranted.

- **Policy Circulation 4.9** Review all existing roadways without pedestrian facilities when they are considered for improvements to determine if new pedestrian facilities are warranted. New roadways should also be assessed for pedestrian facilities.
- **Policy Circulation 6.1** Provide dedicated and recorded public access to all parcels of land, except as provided for under the statutes of the State of California.
- **Policy Circulation 6.2** Require all-weather access to all new development.
- **Policy Circulation 6.3** Limit access points and intersections of streets and highways based upon the road's General Plan classification and function. Require that access points be located so that they comply with Riverside County's minimum intersection spacing standards. Under special circumstances the Transportation Department may consider exceptions to this requirement.
- **Policy Circulation 8.6** Encourage the use of public improvement financing mechanisms, and equitably distribute the costs of road improvements among all those who benefit from the road improvements, including current roadway users.
- **Policy Circulation 11.1** Where appropriate, reserve right-of-way to accommodate for designated transit service.
- **Policy Circulation 11.3** Design the physical layout of arterial and collector highways to facilitate bus operations. Locations of bus turn outs and other design features should be considered.
- **Policy Circulation 11.5** Accommodate transit through higher densities, innovative design, and right-of-way dedication.
- **Policy Circulation 16.1** Implement the Riverside County trail system as depicted in the Bikeways and Trails Plan, Figure C-6.
- **Policy Circulation 16.2** Develop a multi-purpose trail network with support facilities which provide a linkage with regional facilities, and require trailheads and staging areas that are equipped with adequate parking, equestrian trailer parking (as appropriate), bicycle parking, restrooms, informative signage, interpretive displays, maps, and rules of appropriate usage and conduct on trails accessed from such facilities.
- **Policy Circulation 16.3** Require that trail alignments either provide access to or link scenic corridors, schools, parks, bus stops, transit terminals, park and ride commuter lots, and other areas of concentrated public activity, where feasible.
- **Policy Circulation 16.4** Require that all development proposals located along a planned trail or trails provide access to, dedicate trail easements or right-of-way, and construct their fair share portion of the trails system. Evaluate the locations of existing and proposed trails within and adjacent to each development proposal and ensure that the appropriate easements are established to preserve planned trail alignments and trail heads.
  a. Require that all specific plans and other large-scale development proposals include trail networks as part of their circulation systems.
  b. Ensure that new gated communities, and where feasible, existing gated communities, do not preclude trails accessible to the general public from traversing through their boundaries.
  c. Provide buffers between streets and trails, and between adjacent residences and trails.
  d. Make use of already available or already disturbed land where possible for trail alignments.
  e. Require that existing and proposed trails within Riverside County connect with those in other neighboring city, county, state, and federal jurisdictional areas.
- **Policy Circulation 16.5** Identify all existing rights-of-way which have been obtained for trail purposes through the land development process.
  a. Once the above task has been accomplished, analyze the existing rights of-way and determine the most expedient method for connecting the parts.

- **Policy Circulation 16.6** Examine the use of public access utility easements for trail linkages to the regional trails system and/or other open space areas, as feasible. These potential corridors include, but are not limited to, the rights-of-way for:
  a. water mains;
  b. water storage project aqueducts;
  c. irrigation canals;
  d. flood control;
  e. sewer lines;
  f. fiber optic cable lines;
  g. gas lines;
  h. electrical lines, and
  i. fire roads, railroads, and bridges.
- **Policy Circulation 16.7** Adhere to the following trail-development guidelines when siting a trail:
  a. Require, where feasible, trails in urban areas to be located either outside of road rights-of-way or within road rights-of-way with the additional dedication right-of-way or easements in fee title to the County of Riverside requiring dual use of utility corridors, irrigation and flood control channels so as to mix uses, separate traffic and noise, and provide more trail services at less cost.
  b. Secure separate rights-of-way for non-motorized trails when physically, financially and legally feasible. Where a separate right-of-way is not feasible, maintain recreation trails within the County of Riverside or Flood Control right-of-way, where feasible.
  c. Develop and implement trail design standards which will minimize maintenance due to erosion or vandalism.
  d. Maximize visibility and physical access to trails from streets and other public lands.
  e. Provide a trail surface material that is firm and unyielding to minimize erosion and injuries.
  f. When a trail is to be obtained through the development approval process, base the precise trail alignments on the physical characteristics of the property, assuring connectivity through adjoining properties.
  g. Consider the use of abandoned rail lines as multipurpose rail-trails corridors through the "Rails-to-Trails" program.
  h. Place all recreation trails safe distances from the edges of active aggregate mining operations and separate them by physical barriers, such as fences, berms, and/or other effective separation measures. Avoid placing a trail where it will cross an active mined materials haul route.
  i. Install warning signs indicating the presence of a trail at locations where regional or community trails cross public roads. Design and build trail crossings at intersections with proper signs, signals, pavement markings, crossing islands, and curb extensions to ensure safe crossings by users. Install trail crossing signs signal lights (as appropriate) at the intersections of trail crossings with public roads to ensure safe crossings by users.
  j. Design and construct trails that properly account for such issues as sensitive habitat areas, cultural resources, flooding potential, access to neighborhoods and open space, safety, alternate land uses, and usefulness for both transportation and recreation.
  k. Coordinate with other agencies and/or organizations (such as the U.S. Fish and Wildlife Service, National Park Service, Bureau of Land Management, U. S. Army Corp of Engineers, U. S. Bureau of Reclamation, and the California Department of Transportation) to encourage the development of multi-purpose trails. Potential joint uses may include historic, cultural resources, and environmental interpretation, access to fishing areas and other recreational uses, opportunities for education, and access for the disabled.
  l. Work with landowners to address concerns about privacy, liability, security, and trail

maintenance.
m. Regional Urban, Regional Rural, and Regional Open Space trails should be designed so as to be compatible with the community contexts in which the trails are being sited.
n. Driveway crossings by trails should be designed and surfaced in a manner compatible with multipurpose trails usage. Except for local, neighborhood-serving trails that are not intended as primary community linkages, select routes for trails that minimize driveway crossings.
o. Benches, fencing, water fountains, trees and shading, landscape buffers, rest stops, restrooms, and other trail-related amenities shall be provided where appropriate.
p. All trails along roadways shall be appropriately signed to identify safety hazards, and shall incorporate equestrian crossing signals, mileage markers, and other safety features, as appropriate.
q. Information about Riverside County's trail system shall be provided at the Riverside County Park and Open Space District and online in order to make the public aware of Riverside County's trail system.
r. Trails shall not be sited along sound walls, project boundary walls, and other walls that effectively obstruct visibility beyond the edge of a trail.
s. All trail surfacing shall be appropriate to an array of users of the trail. Soft-surfaced trails shall have smooth, firm, slip-resistant surfacing so as to minimize foot and ankle injuries.
t. Use already available or disturbed land for trails wherever possible for new or extended trails.
u. Use pervious pavement or bio-swales along paved trails to assist in maintaining water quality.
v. Coordinate with local Native American tribes for any proposed trails under the mandates of "SB18" Traditional Tribal Places Law.

- **Policy Circulation 16.8** Require the installation (where appropriate and pursuant to County of Riverside standards) of the appropriate styles of fencing along trail alignments that separate trails from road right-of-ways (ROWs), or where trails are located within road ROWs, that provide adequate separation from road traffic, in order to adequately provide for public safety. Examples of such fence types include simulated wood post and rail fencing constructed of PVC material, wood round post and rail, and wood-textured concrete post and rail fencing.
- **Policy Circulation 16.9** Coordinate with cities, adjacent counties and affected state or federal land management entities regarding regional trails that cross over or terminate at jurisdictional boundaries. Ensure that adequate consideration is given to how the trail is addressed once it leaves the jurisdiction of Riverside County
- **Policy Circulation 17.1** Develop Class I Bike Paths, Class II Bike Lanes, and Class I Bike Paths/Regional Trails (Combination Trails), as shown in the Trails Plan (Figure C-7), to the design standards adopted Riverside County Design Guidelines (for communities that have them), the Riverside County Regional Park and Open Space Trails Standards Manual, and other Riverside County Guidelines.
- **Policy Circulation 17.2** Require bicycle access between proposed developments and other parts of the Riverside County trail system through dedication of easements and construction of bicycle accessways.
- **Policy Circulation 17.3** Ensure that the bikeway system incorporates the following: a. Interconnection throughout and between cities and unincorporated communities. b. Appropriate lanes to specific destinations such as state or county parks. c. Appropriate opportunities for recreational bicycle riding and bicycle touring. d. Opportunities for bicycle commuting and golf cart commuting within a community, as appropriate for the terrain, traffic levels and proximity to surrounding destinations. e. Bikeways connecting to all urban transit

centers and systems (bus stops and Metrolink stations) in the vicinity. f. Bicycle parking at transit stops and park-and-ride lots.

- **Policy Circulation 17.4** Ensure that alternative modes of motorized transportation, such as buses, trains, taxi cabs, etc., plan and provide for transportation of recreational and commuting bicyclists and bicycles on public transportation systems. Coordinate with all transit operators to ensure that bicycle facilities are provided along and/or near all transit routes, whenever feasible. New land developments shall be required to provide bicycle facilities to existing or future planned transit routes.
- **Policy Circulation 18.1** TRAIL ACQUISITION
  a. Promote public/private partnerships for trail acquisition.
  b. Seek ways to build a trail system affordably, and seek partners in doing so within a reasonable time frame, possibly in stages, to serve all trail communities, and upgrade the system of linkages/destinations.
  c. Determine which public and/or private agencies have existing easements or unused rights-of-way, which potentially could be incorporated as trail linkages throughout Riverside County. Such agencies may include the Riverside County Flood Control and Water Conservation District, regional and local parks districts and transportation agencies, cities, federal or state land management entities, various utility companies/districts, and railroad companies. Use roads, dirt roads, and other easements as trails routes. Foster partnerships which serve to facilitate the siting, building, and managing of trails.
  d. Evaluate the potential use of private-landowner tax credits for acquiring necessary trail easements and/or rights-of-way. A system such as this would allow a landowner to dedicate an easement for trail purposes in exchange for having that portion of the property assessed as open-space instead of a higher land-use category.
  e. Seek to connect existing cul-de-sacs to each other, and to trail networks. In rare occasions, this may entail purchasing homes at the ends of streets, constructing the connections, and reselling the homes.
  f. Wherever possible and to the extent consistent with overall trail system objectives, use trail designs and locations that minimize construction and maintenance costs.
- **Policy Circulation 18.2** TRAIL MANAGEMENT AND MAINTENANCE
  a. Implement maintenance options such as the use of volunteers, associations, or private landowner maintenance agreements, and/or adopt-a-trail programs sponsored by various groups.
  b. Implement methods to discourage unauthorized use of trails by motorized vehicles, which may cause trail deterioration, create an unsafe environment, and/or disrupt the enjoyment of the trails by legitimate trail users. These methods may include the installation of gates and motorcycle barriers, posting signs prohibiting unauthorized activities, or implementing educational programs to encourage the proper use of trails.
  c. Research the potential for, and consider establishing a countywide trail management entity that will facilitate the acquisition of adequate funds for trail maintenance.
  d. Research the potential for, and consider establishing a separate agency within Riverside County to manage and maintain Riverside County's trails system.
  e. Use trail designs that remove or limit injury/safety liability concerns.
  f. Use trail designs that minimize trail maintenance costs.
- **Policy Circulation 18.3** TRAIL FUNDING
  a. Solicit all possible sources of funding to plan, acquire, and construct recreational trails. Sources can include, but not be limited to, development mitigation fees, private foundation grants funds or assessments from local, regional, state, or federal government entities.
  b. Persuade local communities to finance their own community trail systems through the use of special tax assessment districts. If applicable, these districts should also provide

adequate regulation for the keeping of horses.

- **HVWAP 7.1** Accelerate the construction of transportation infrastructure in the Highway 79 corridor between Temecula, Hemet, San Jacinto and Banning Policy Area. The County of Riverside shall require that all new development projects demonstrate adequate transportation infrastructure capacity to accommodate the added traffic growth. The County of Riverside shall coordinate with cities in the Highway 79 corridor to accelerate the usable revenue flow of existing funding programs, thus expediting the development of the transportation.
- **HVWAP 7.2** Maintain program in the Highway 79 Policy Area to ensure that overall trip generation does not exceed system capacity and that the system operation continues to meet Level of Service standards. In general, the program would establish guidelines to be incorporated into individual Traffic Impact Analysis that would monitor overall trip generation from residential development to ensure that overall within the Highway 79 Policy Area development projects produce traffic generation at a level that is 9% less than the trips projected from the General Plan traffic model residential land use designations. Individually, projects could exceed the General Plan traffic model trip generation level, provided it can be demonstrated that sufficient reductions have occurred on other projects in order to meet Level of Service standards.
- **Policy HVWAP 11.1** Design and develop the vehicular roadway system per Figure 8, Circulation, and in accordance with the System Design, Construction and Maintenance section of the General Plan Circulation Element.
- **Policy HVWAP 11.2** Maintain Riverside County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.
- **Policy HVWAP 13.1** Maintain and improve the trails and bikeways system, as shown on Figure 9, and as it is discussed in the Non-Motorized Transportation section of the General Plan Circulation Element.
- **Policy SCMVAP 1.1** Accelerate the construction of transportation infrastructure in the Highway 79 corridor between Temecula, Hemet, San Jacinto and Banning. The County of Riverside shall require that all new development projects demonstrate adequate transportation infrastructure capacity to accommodate the added traffic growth. The County of Riverside shall coordinate with cities in the Highway 79 corridor to accelerate the usable revenue flow of existing funding programs, thus expediting the development of the transportation.

4.15.3 Thresholds of Significance

As discussed in Section 4.15.1, the Project impacts to three (3) criteria pertaining to transportation will be analyzed in this DEIR. The Project would have a significant impact if it would:

43. Transportation.

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

44. Bike Trails.

a. Include the construction or expansion of a bike system or bike lanes?

Minimum Level of Service (LOS)

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions (County of Riverside, Caltrans and City of Menifee).

County of Riverside

Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS:

> "*The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or are intended to be accepted into the County maintained roadway system:*
> - *LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
> - *LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
> - *LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.*
>
> *Notwithstanding the forgoing minimum LOS targets, the Board of Supervisors may, on occasion by virtue of their discretionary powers, approve a project that fails to meet these LOS targets in order to balance congestion management considerations in relation to benefits, environmental impacts and costs, provided an Environmental Impact Report, or equivalent, has been completed to fully evaluate the impacts of such approval. Any such approval must incorporate all feasible mitigation measures, make specific findings to support the decision, and adopt a statement of overriding considerations.*"

Caltrans

Caltrans requires the use of analysis methods provided in the Highway Capacity Manual (HCM) for the analysis of ramp intersections and basic freeway segments. Caltrans "endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on state highway facilities"; it does not require that LOS "D" (shall) be maintained. 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. For the *TIA* purposes, LOS D is the target LOS standard and will be utilized to assess the Project impacts at the state-controlled study intersections.

City of Menifee

According to City of Menifee criteria, LOS D is the minimum acceptable condition that should be maintained during the morning and evening peak commute hours. Project related significant impacts are identified by comparing without Project conditions to with Project conditions based on the following criteria:

- If the LOS deteriorates from an acceptable LOS (LOS D or better) to an unacceptable LOS (LOS E or F); or
- If the intersection is already operating at an unacceptable LOS (LOS E or F) under without Project traffic conditions and the proposed Project adds 50 or more peak hour trips to the intersection.

The questions posed in the IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the City's IS. The potential transportation changes in the environment are addressed in response to the above thresholds in the following analysis.

Vehicle Miles Traveled (VMT)

In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. For some parts of California (and eventually the entire state), this legislation will change the way that transportation studies are conducted for environmental documents. In the areas where SB 743 is implemented, delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under the California Environmental Quality Act (CEQA). Instead, new performance measures such as Vehicle Miles Traveled (VMT) will be used.

During the preparation of the traffic impact study, guidelines for the implementation of SB 743 were not yet incorporated into CEQA. Therefore, the traffic impact study followed current practice regarding state and local guidance as of the date of preparation. In December 2018 CEQA Guidelines were updated to include a threshold for evaluating traffic impacts using the VMT methodology. This new methodology is required to be used statewide for projects beginning in or after July 2020 unless the lead agency adopts the VMT thresholds earlier. As such, and because County of Riverside as the lead agency has not yet adopted VMT thresholds, the analysis for this Project utilizes the LOS methodology.

Recent case law pertaining to this matter is Citizens for Positive Growth & Preservation v. City of Sacramento (2019) 2019 Cal. App. LEXIS 1274; it is a Third District Court of Appeal case. The case holds (as it relates to LOS) that the CEQA Guidelines section 15064.3 does apply prospectively; but the court also cites Public Resources Code (PRC) section 21099 (b)(2) which says "upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service…shall not be considered a significant impact on the environment…"

The court basically said since the Secretary already approved the updated Guidelines in late 2018, that based on PRC 21099(b)(2) it is not a significant physical environmental impact now. But when the petitioner tried to argue then that they should have done a VMT, the court

essentially stated that since 15064.3 is prospective, the City has until July 2020, so the analysis wasn't defective.

Notwithstanding, for purposes of full disclosure, it is estimated that the Project would generate approximately 10,971 annual VMT per capita[1], based on the California Emissions Estimator Model (CalEEMod) v2016.3.2.

4.15.4 Potential Impacts

THRESHOLD 43.a: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Significant and Unavoidable Impact

Projected Future Traffic

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. As discussed above, potential impacts were assessed for two development phases.

The two phases and their anticipated opening years are as follows:

- Phase 1 2021 – 317 single-family residential units and an 8.2-acre park; and
- Phase 2 Project Buildout 2025 – Phase 1 development plus 257 single-family residential units.

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.

Trip generation rates used to estimate Project traffic and a summary of the Project's trip generation are shown on **Table 4.15-12, *Project Trip Generation Summary***. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE) for Single Family Residential (ITE Land Use Code 210) and Public Parks (ITE Land Use Code 411) in their published Trip Generation Manual, 10th Edition, 2017.

[1] Total Annual VMT calculated by CalEEMod: 18,321,815 ÷ 1,670 residents (574 dwelling units x 2.91 persons per dwelling).

Table 4.15-12
Project Trip Generation Summary

Land Use	Units[1]	ITE LU Code	AM Peak Hour			PM Peak Hour			Weekday Daily
			In	Out	Total	In	Out	Total	
Trip Generation Rates[2]									
Single Family Detached Residential	DU	210	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Public Park	AC	411	0.01	0.01	0.02	0.06	0.05	0.11	0.78
Land Use	**Units[1]**	**Quantity**	**AM Peak Hour**			**PM Peak Hour**			**Weekday Daily**
			In	**Out**	**Total**	**In**	**Out**	**Total**	
Trip Generation Summary									
Phase 1 (2021):									
Single Family Detached Residential	DU	317	59	176	235	198	116	314	2,992
Parks	AC	8.20	0	0	0	0	0	0	6
Project Phase 1 (2021) Total			**59**	**176**	**235**	**198**	**116**	**314**	**2,998**
Single Family Detached Residential	DU	574	106	319	425	358	210	568	5,419
Parks	AC	8.20	0	0	0	0	0	0	6
Project Buildout (2025) Total			**106**	**319**	**425**	**358**	**210**	**568**	**5,425**

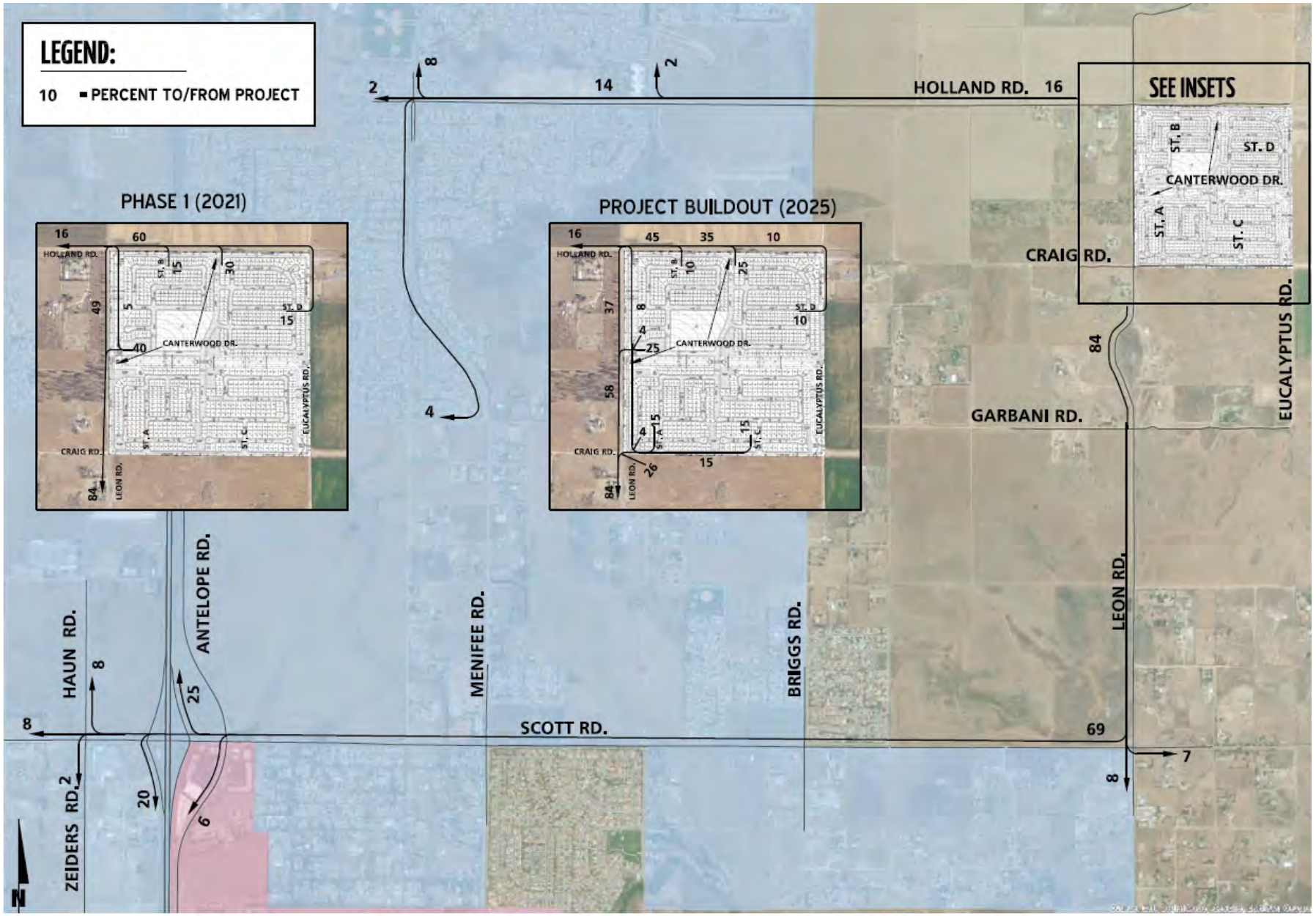
[1] DU = Dwelling Units; AC = Acres
[2] Trip Generation Source: Institute of Transportation Engineers (ITE),Trip Generation Manual, Tenth Edition (2017).

Phase 1 (2021) of the Project is estimated to generate a net total of 2,998 trip-ends per day on a typical weekday with approximately 235 AM peak hour trips and 314 PM peak hour trips. Phase 2 Project Buildout (2025) is estimated to generate a net total of 5,425 trip-ends per day with 425 AM peak hour trips and 568 PM peak hour trips.

Project Trip Distribution

Trip distribution patterns for the residential uses proposed as part of the Project are illustrated on **Figure 4.15-19, *Project Trip Distribution***. This trip distribution pattern has been utilized for E+P, EAP/EAPC (Phase 1 2021), and EAP/EAPC (Phase 2 Project Buildout 2025) traffic conditions.

FIGURE 4.15-19
PROJECT TRIP DISTRIBUTION



Source: TIA (**Appendix K**)

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Modal Split

Although the use of public transit, walking, and/or bicycling have the potential to reduce Project-related traffic, such reductions were not taken into consideration in the *TIA* to provide a conservative 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 ADT and peak hour intersection turning movement volumes for Phase 1 (2021) are shown on **Figure 4.15-20, *Project Only (Phase 1: 2021) Average Daily Traffic (ADT)***, and **Figure 4.15-21, *Project Only (Phase 1: 2021) Traffic Volumes***.

Project ADT and peak hour intersection turning movement volumes for Phase 2 Project Buildout (2025) traffic conditions are shown on **Figure 4.15-22, *Project Only (Phase 2 Project Buildout: 2025) Average Daily Traffic (ADT)***, and **Figure 4.15-23, *Project Only (Phase 2 Project Buildout: 2025) Traffic Volumes***.

Construction Traffic

Project construction activities may potentially result in temporary and transient traffic deficiencies related to:

- Construction employee commutes;
- Import of construction materials and soils; and
- Transport and use of heavy construction equipment.

The Project Applicant would be required to develop and implement a County-approved Traffic Control Plan (TCP) addressing potential construction-related traffic detours and disruptions. In general, the TCP would ensure that to the extent practical, construction traffic would access the Project site during off-peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses. The TCP is included as **Standard Condition SC-TR-2** (see Section 4.15.5). The TCP is a standard condition and is not considered unique mitigation under CEQA.

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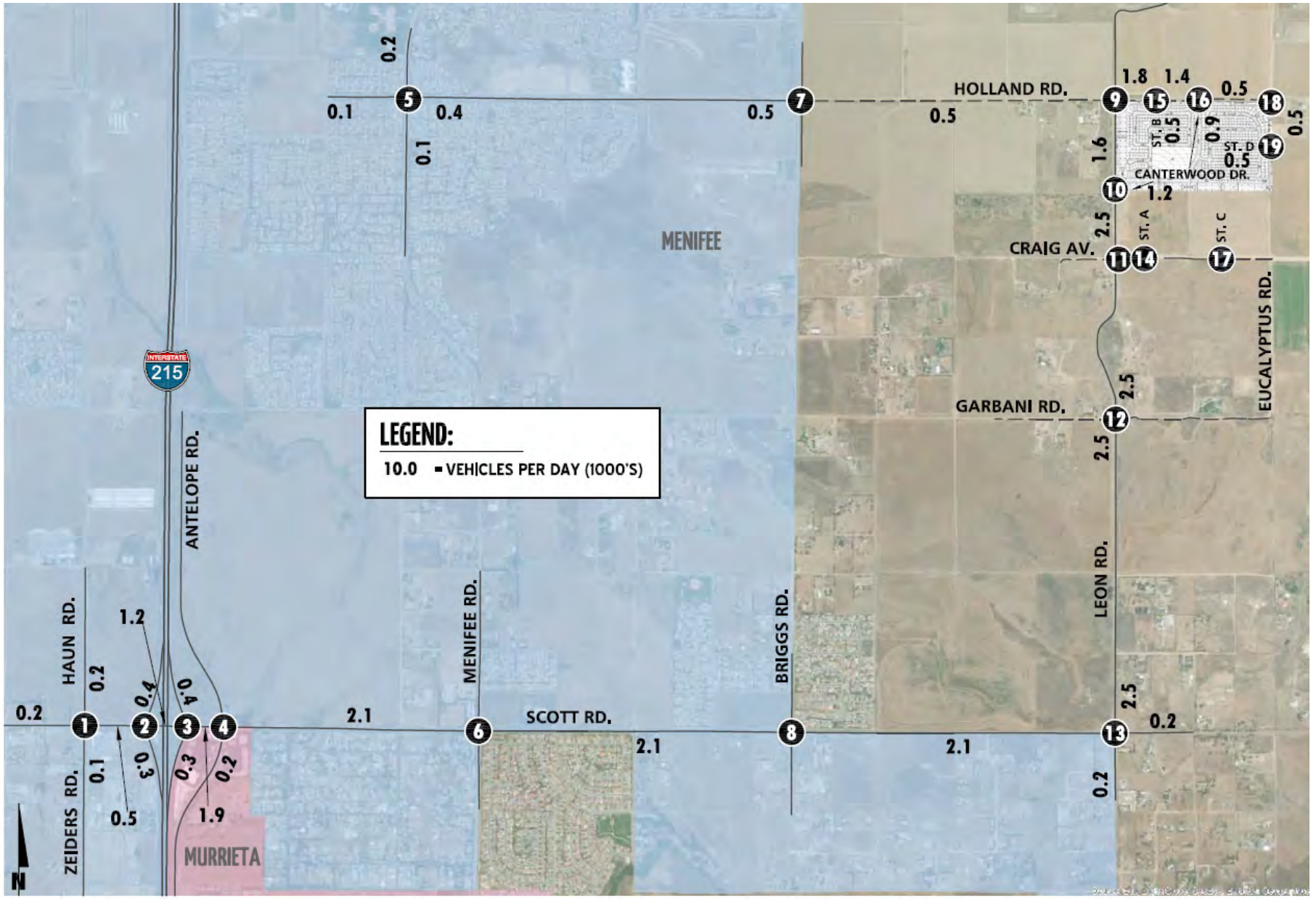
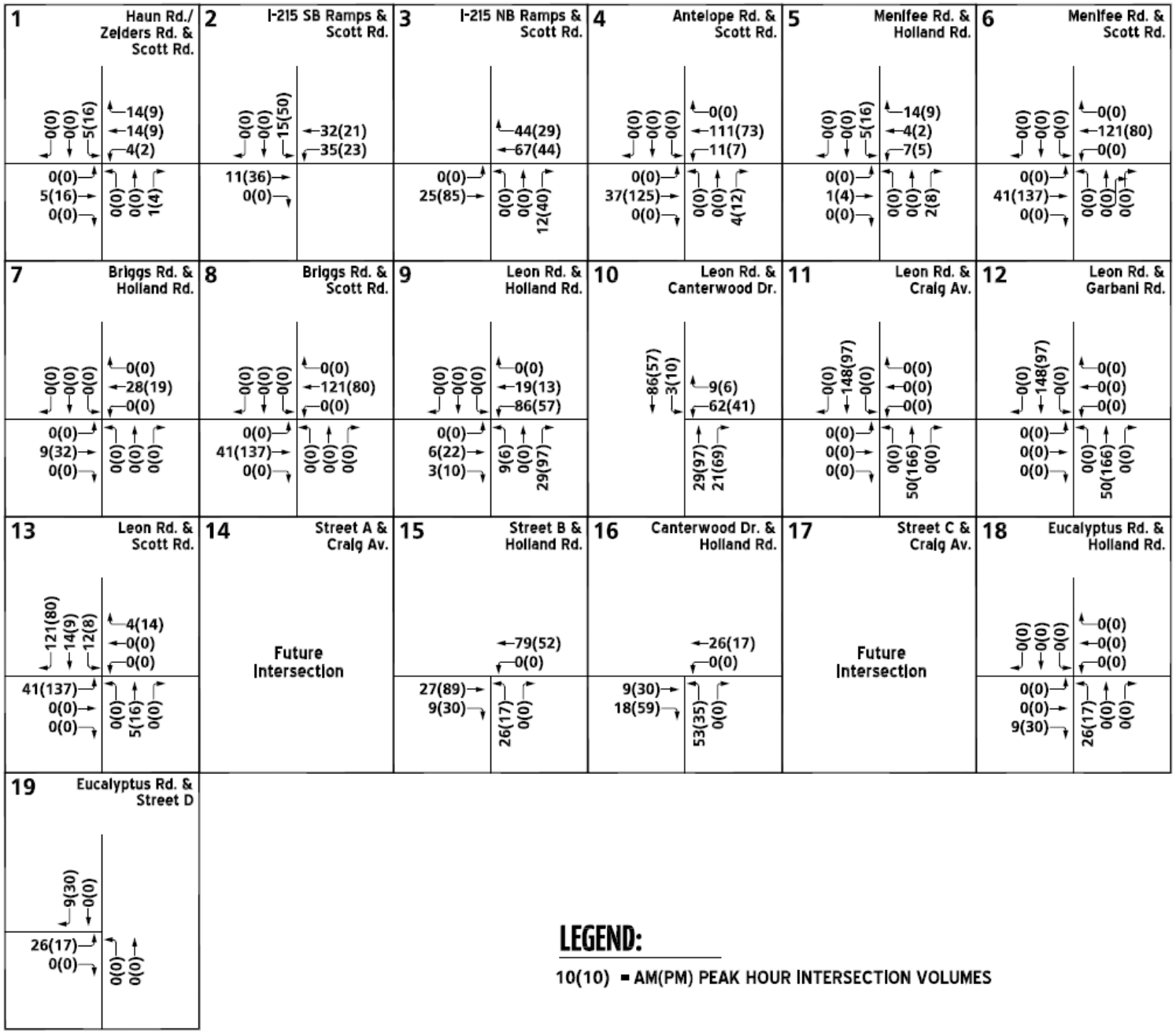
FIGURE 4.15-20
PROJECT ONLY (PHASE 1: 2021) AVERAGE DAILY TRAFFIC (ADT)



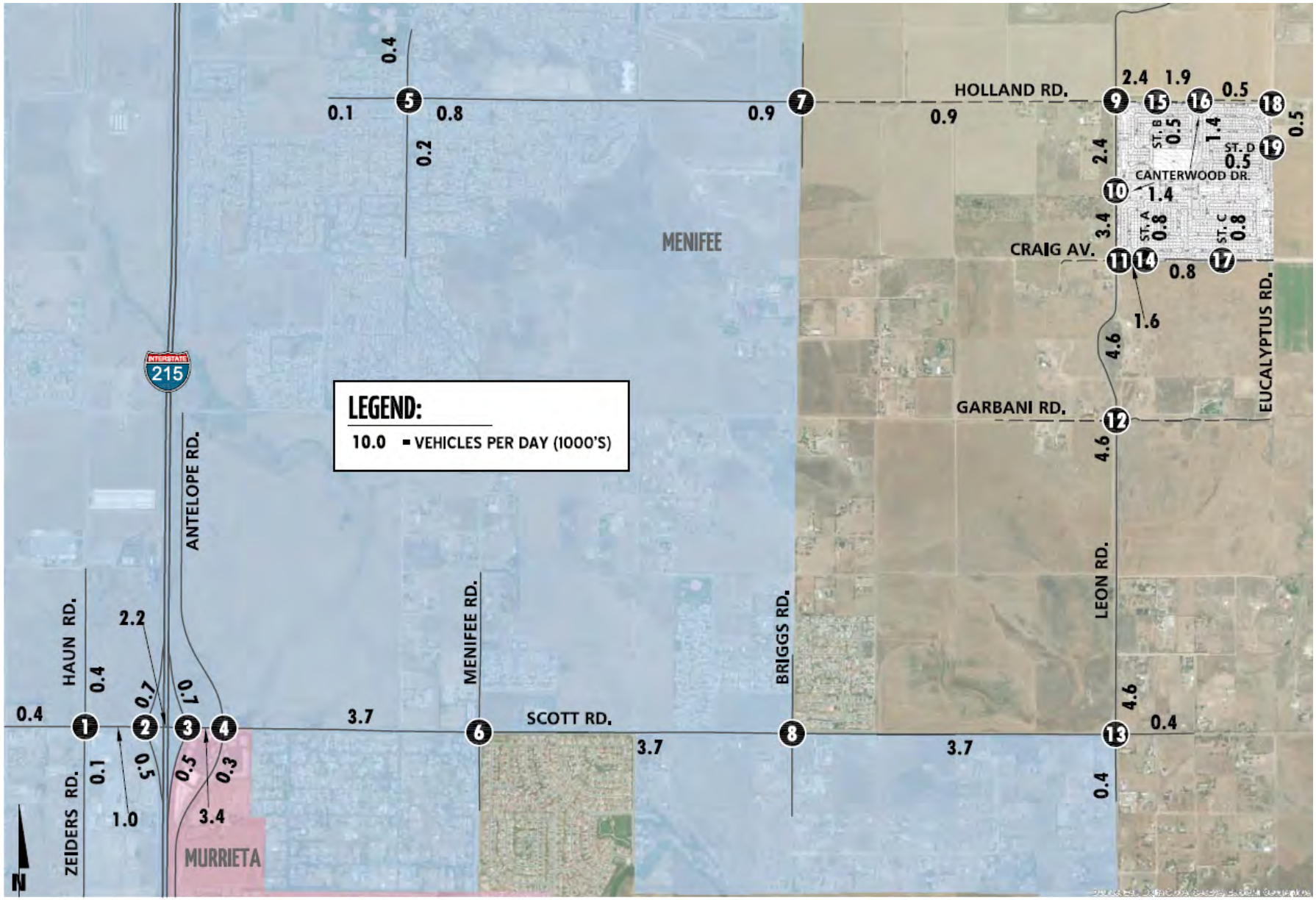
Source: TIA (**Appendix K**)

FIGURE 4.15-21
PROJECT ONLY (PHASE 1: 2021) TRAFFIC VOLUMES



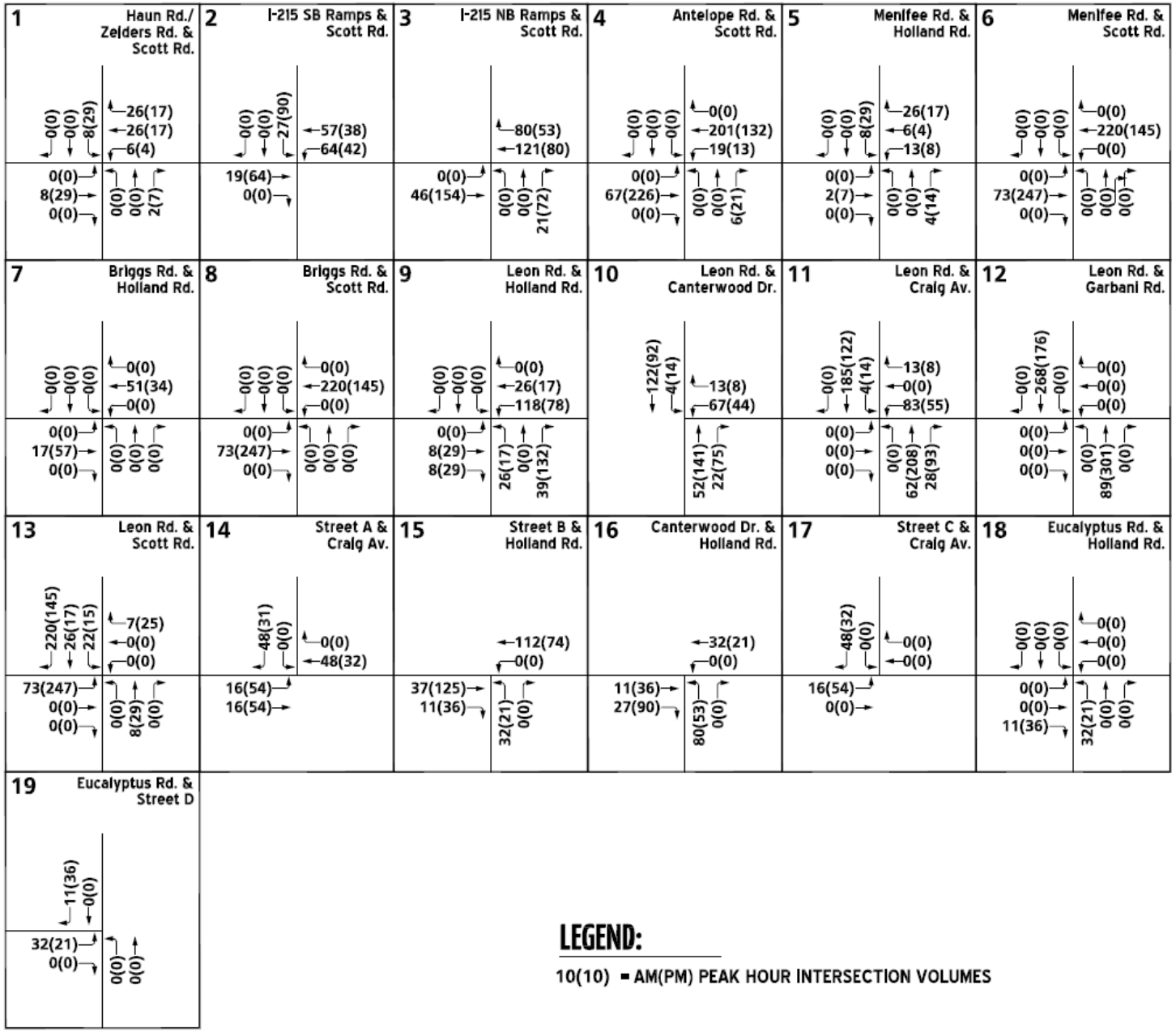
Source: TIA (**Appendix K**)

FIGURE 4.15-22
PROJECT ONLY (PHASE 2 PROJECT BUILDOUT: 2025) AVERAGE DAILY TRAFFIC (ADT)



Source: TIA (**Appendix K**)

FIGURE 4.15-23
PROJECT ONLY (PHASE 2 PROJECT BUILDOUT: 2025) TRAFFIC VOLUMES



Source: TIA (**Appendix K**)

Background Traffic

Future year traffic forecasts have been based upon a background (ambient) growth factor of 2% per year. The ambient growth factor is intended to approximate traffic growth. The total ambient growth is 6.12% for Phase 1 2021 traffic conditions (compounded growth of two percent per year over 3 years) and 14.87% for Phase 2 Project Buildout 2025 traffic conditions (compounded growth of two percent per year over 7 years). This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

The adopted Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for Riverside County identifies projected growth in population of 359,000 in 2012 to 499,200 in 2040, or a 28.1% increase over the 28-year period. The change in population equates to roughly a 1.18% growth rate compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 31.1%, or 1.34% annual growth rate. Finally, growth in employment over the same 27-year period is projected to increase by 54.98%, or a 2.89% annual growth rate. Therefore, the annual growth rate of 2% in conjunction with cumulative project traffic would appear to be conservative and tend to overstate as opposed to understate future traffic growth.

Cumulative Development Traffic

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the County of Riverside. The neighboring jurisdictions of Menifee, Murrieta, and Temecula have also been contacted to include key projects in their respective cities.

Figure 4.15-24, *Cumulative Development Location Map* illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown on **Table 4.15-13, *List of Cumulative Developments***. Where applicable, the traffic generated by individual cumulative projects has been manually added to the EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) forecasts to ensure that traffic generated by the listed cumulative development projects in **Table 4.15-13** are reflected as part of the background traffic. For projects that are likely to contribute nominal traffic to the study area intersections, their traffic is assumed to be accounted for through the application of the ambient growth factor.

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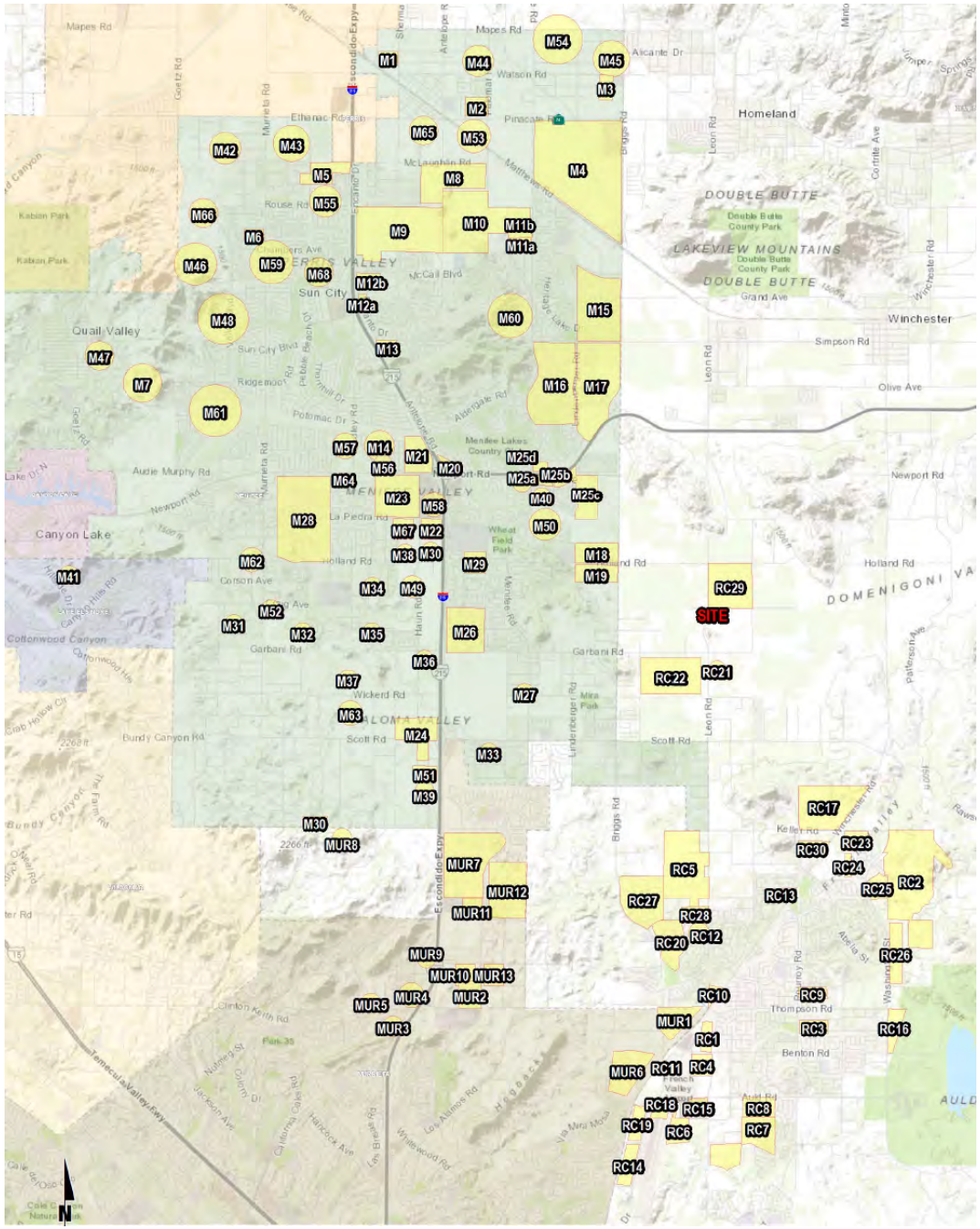
FIGURE 4.15-24
CUMULATIVE DEVELOPMENT LOCATION MAP



Source: TIA (**Appendix K**)

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Table 4.15-13
List of Cumulative Developments

#	Project Name	Land Use[1]	Quantity	Units[2]
	COUNTY OF RIVERSIDE			
RC1	CUP 03467	Home Improvement Store	137.627	TSF
		Fast Food w/ Drive-Thru	12.042	TSF
		Bank w/ Drive-Thru	4.014	TSF
		Shopping Center	134.972	TSF
		Gas Station	12	VFP
RC2	Belle Terre (SP 382)	Single Family Housing	1282	DU
RC3	TR 33170	Condominium	186	DU
	TR 34689	Single Family Housing	19	DU
	TR 35161	Single Family Housing	54	DU
RC4	PP 23146	Office	346.000	TSF
	TR 32323	Single Family Housing	38	DU
RC5	Spencer's Crossing	SFDR	753	DU
		Active Parks	5.6	AC
		Elementary School	600	STU
RC6	French Valley Airport	Business Park	694.629	TSF
		Apartments	240	DU
		Condominium	211	DU
RC7	TR 31871	Single Family Housing	258	DU
	TR 36376	Single Family Housing	446	DU
RC8	TR 34324	Condominium	127	DU
	TR 32011	Single Family Housing	33	DU
RC9	TR 33307	Single Family Housing	55	DU
RC10	CUP 03593	Gas Station	6.200	TSF
		Commercial Retail	26.500	TSF
		Storage	128.600	TSF
	TR 33751	Single Family Housing	11	DU
RC11	PP 20375	Fast Food w/ Drive-Thru	2.000	TSF
RC12	Los Olivos	SFDR	48	DU
RC13	PP 24903	Church	15.273	TSF
RC14	PM 35212	Hotel	200	RM
		Fitness Club	20.000	TSF
		Medical Office	77.000	TSF
		Office	160.000	TSF
		Research & Development	188.000	TSF
		High-Turnover Restaurant	14.500	TSF
		Fast Food w/ Drive-Thru	8.000	TSF
RC15	PP 19414	Office	78.410	TSF
RC16	TTM No. 35770	Single Family Housing	156	DU
RC17	Keller Crossing Specific Plan	Single Family Housing	98	DU
		Continuing Care Retirement Community	225	DU
		General Office	250.000	TSF
		Shopping Center	400.000	TSF
RC18	Fausto Office Building	Single Tenant Office Building	7.850	TSF

Table 4.15-13, continued

#	Project Name	Land Use[1]	Quantity	Units[2]
COUNTY OF RIVERSIDE				
RC19	French Valley Walmart & Commercial/Business Center (PP 21750, PM 34669)	Free-Standing Discount Store/Superstore	205.000	TSF
		Shopping Center	113.300	TSF
		Bank with Drive-Thru	5.500	TSF
		High Turnover (Sit-Down) Restaurant	6.500	TSF
		Fast Food Restaurant w/ Drive-Thru	4.000	TSF
RC20	Specific Plan 312 A-1	Single Family Housing	1,671	DU
		Parks	32.1	AC
RC21	Perris Union HSD High School	High School	2800	STU
RC22	La Ventana Ranch	Single Family Housing	535	DU
		Community Park	15.0	AC
		Passive Park	2.0	AC
RC23	TR36722	SFDR	146	DU
RC24	TR36687	SFDR	71	DU
RC25	TR33423M1	SFDR	132	DU
RC26	TR30837	SFDR	320	DU
RC27	TR30433	SFDR	508	DU
RC28	Los Olivos	SFDR	48	DU
RC29	TR36467	SFDR	381	DU
		Multifamily Residential	92	DU
RC30	Morningstar	Supermarket	55.000	TSF
		Day Care Center	5.000	TSF
		Pharmacy w/ Drive-Thru	13.600	TSF
		Bank w/ Drive-Thru	113.300	TSF
		Shopping Center	64.600	TSF
		High-Turnover Restaurant	11.500	TSF
		Fast-food Restaurant w/ Drive-Thru	3.000	TSF
		Gasoline Station w/ Convenience Market	12	VFP
CITY OF MENIFEE				
M1	UPS Expansion	General Light Industrial	30.000	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 35143	Single Family Residential	15	DU
M6	TR 32314	Single Family Residential	33	DU
M7	TM 28859	Single Family Residential (50% Complete)	246	DU

Table 4.15-13, continued

#	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF MENIFEE				
M9	Fleming Ranch Specific Plan	Single Family Residential	1,169	DU
		Apartments	556	DU
		Active Parks	16.1	AC
		City Parks	11.5	AC
		Elementary School	1,050	STU
		Business Park	163.000	TSF
M10	TR 29835	Single Family Residential	543	DU
	TR 31098	Single Family Residential	264	DU
M11a	CUP 03549	Shopping Center	81.700	TSF
M11b	Village at Junipero	Apartments	240	DU
M12a	TR 33446	Condo/Townhomes	180	DU
M12b	Menifee North Shopping Center	Free-Standing Discount Store	200.000	TSF
		Bank w/ Drive-Thru	5.500	TSF
		Fast-food w/ Drive-Thru	6.700	TSF
		Fast-food w/o Drive-Thru	5.500	TSF
		Coffee Shop w/ Drive-Thru	2.000	TSF
		Retail	7.500	TSF
M13	PP 19469R1	Senior Apartments	221	DU
M14	American Tire Depot (CUP 2013-157)	Auto Shop	7.171	TSF
M15	TR 34180	Single Family Residential (75% Complete)	484	DU
		Elementary School (75% Complete)	950	STU
	TR 34406	Single Family Residential (100 Lots Complete)	817	DU
		Shopping Center	228.690	TSF
M16	TR 31455	Single Family Residential	60	DU
	TR 31582	Single Family Residential (25% Complete)	280	DU
M17	TR 32186	Single Family Residential (75% Complete)	101	DU
	TR 32100	Single Family Residential	170	DU
	TR 32101	Single Family Residential	197	DU
	TR 32102	Single Family Residential	272	DU
M18	Nautical Cove Residential	Single Family Residential	235	DU
M19	Menifee Heights - TR32277	Single Family Residential	359	DU
		Active Parks	10.2	AC
M20	Menifee Lakes Shopping Center (PP 2009-052)	Shopping Center	120.848	TSF
		Gas Station & Market / Car Wash	12	VFP
		Hotel	71	ROOM
M21	SP 248 Newport Hub	Shopping Center (50% Occupied)	229.700	TSF
		General Office	97.580	TSF
		General Light Industrial (50% Occupied)	241.760	TSF
		Motel	100	ROOM
M22	Pechanga Commercial Site (PP 2010-123)	Shopping Center	208.160	TSF

Table 4.15-13, continued

#	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF MENIFEE				
M23	Menifee Town Center Specific Plan	Shopping Center	509.370	TSF
		Hotel	200	ROOM
		General Office	65.340	TSF
		Single Family Residential	577	DU
		Condo/Townhomes	475	DU
M24	Junction at Menifee	Shopping Center	526.800	TSF
	Menifee Shopping Center	Shopping Center	238.180	TSF
	Shops at Scott	Shopping Center (50% Complete)	82.000	TSF
		Fast-Food Restaurant w/ Drive-Thru (50% Complete)	9.000	TSF
M25a	TPM 2009-168 (PM 36720)	Retail	112.167	TSF
M25b	Newport Menifee Retail Shopping Center	Fast-food w/ Drive-Thru	7.000	TSF
		Supermarket	45.272	TSF
		Bank w/ Drive-Thru	5.000	TSF
		Pharmacy w/ Drive-Thru	14.576	TSF
		High Turnover (Sit-Down) Restaurant	7.360	TSF
		Retail	58.883	TSF
M25c	The Lakes TR 30422 (SP 247 Amendment 1)	Single Family Residential	992	DU
M25d	Arco Gas Station	Gas Station & Market	16	VFP
M26	TR 32628	Single Family Residential	364	DU
	TR 28206	Single Family Residential (50% Complete)	148	DU
M27	Cantalena Specific Plan	Single Family Residential	353	DU
		Apartments	851	DU
M28*	TR 28786	Single Family Residential	72	DU
	TR 28787	Single Family Residential	67	DU
	TR 28788	Single Family Residential	119	DU
	TR 28789	Single Family Residential	131	DU
	TR 28790	Single Family Residential	110	DU
	TR 28791	Single Family Residential	80	DU
	TR 28792	Single Family Residential	85	DU
	TR 28793	Single Family Residential	77	DU
	TR 28794	Single Family Residential	65	DU
	TR 30812	Single Family Residential	29	DU
M29	Del Oro (Holland Road Residential)	Single Family Residential	68	DU
		Apartments	238	DU
		Senior Housing	100	DU
M30	TR2015-053 / TR 36684	Single Family Residential	10	DU
M31	TR 29636	Single Family Residential (75% Complete)	75	DU
M32	TR 30142	Single Family Residential (113 Lots Complete)	537	DU
M33	Antelope Square	Shopping Center	14.000	TSF
M34	TR 30465	Single Family Residential	8	DU
M35	TR 33883	Single Family Residential	51	DU
M36	PP 18014	Mini-warehouse	191.260	TSF
M37	TR 31194	Single Family Residential	483	DU
	TR 33511	Single Family Residential	71	DU
M38	TR 36303	Single Family Residential	97	DU

Table 4.15-13, continued

#	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF MENIFEE				
M39	Commerce Point (PP 21452 & PP 22280)	General Light Industrial	872.350	TSF
	PP 18570	Warehousing	109.940	TSF
	PP 20021	Warehousing	4.500	TSF
M40	Rite Aid	Pharmacy w/ Drive-Thru	17.185	TSF
		Fast Food w/ Drive-Thru	3.285	TSF
M41	Audie Murphy Ranch SP	Single Family Residential (500 Lots Complete)	2,355	DU
	Canyon Cove	Single Family Residential	198	DU
M42	TTM 34037	Single Family Residential	128	DU
M43	TTM 31856	Single Family Residential	79	DU
M44	TTM 35876	Single Family Residential	17	DU
M45	TTM 33738	Single Family Residential	52	DU
M46	Cimarron Ridge (TTM 36657 / PM 36658)	Single Family Residential	756	DU
M47	Quail Hill (TTM 32794)	Single Family Residential	152	DU
M48	Stonegate (TM31456)	Single Family Residential	177	DU
M49	PA 2014-218 / TR 2015-108	Single Family Residential	80	DU
M50	Stater Bros. (2014-091 / PM36728)	Commercial Retail	121.277	TSF
M51	All Star Storage (PP 2015-156)	Storage	242.150	TSF
M52	His Light (PUP 2009-077)	Church	47.030	TSF
M53	Motte Town Center	Industrial	97.564	TSF
M54	TR31536	Single Family Residential	44	DU
M55	McLaughlin Village (PAR 2015-133)	Townhomes	126	DU
M56	PP 2014-009	Commercial Retail	100.024	TSF
M57	CUP 2015-157	Self-Service Carwash w/ Drive-Thru	11.783	TSF
M58	Menifee Village	Commercial Retail	231.600	TSF
M59	Thorton Terraces (TTM 2014-225)	Townhomes	19	DU
M60	Chapparal Apartments/Condos (PP 2014-040)	Apartment/Condos	5,572	DU
M61	Oak Tree Industries (TTM 29015)	Single Family Residential	18	DU
M62	Alasia - Meritage Homes	Single Family Residential	86	DU
M63	TR 2014-073	Single Family Residential	30	DU
M64	Shops at Newport	Shopping Center	3.490	TSF
		Restaurant	6.467	TSF
M65	Trumble Office and Warehouse (PP 2011-003, EOT 205-208)	Industrial	61.730	TSF
M66	Valley Blvd. Tract (TR 2015-211)	SFDR	75	DU
M67	Regent - South 35 (TR 2015-239)	SFDR	149	DU
M68	2015-246 PAR	Fast Food	2.400	TSF
M69	Impact Church Expansion (2015-249 PP)	Church Expansion		
MUR1	Murrieta Marketplace (DP-2011-3129)	Commercial Retail	548.055	TSF
MUR2	Pacific Landing (DP2008-2668)	Apartments	400	DU
MUR3	CVS	Pharmacy w/ Drive-Thru	14.576	TSF
MUR4	Sierra Lane	Commercial Center	28.709	TSF
MUR5	Mitchell Crossing (DP-2014-864) (Melia Homes)	Multifamily Residential	331	DU
		Specialty Retail	50.000	TSF
MUR6	Adobe Springs (Tentative Parcel Map No. 36779)	SFDR	287	DU
MUR7	Murrieta Fields II (TR32718)	SFDR	10	DU
MUR8	Murrieta Hills (SPO-012-3164) (Phase 1)	SFDR	300	DU
MUR9	The Orchard (DPO-03-161)	Shopping Center	215.850	TSF

Table 4.15-13, continued

#	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF MURRIETA				
MUR10	Vineyard Shopping Center (DPO-2012-3260)	Shopping Center	78.489	TSF
		Hotel	91.000	RM
MUR11	Phase 1 Kaiser (DP-2014-348)	Medical Office	80.000	TSF
	Physician Hospital (Phase 2)	Hospital & Medical Office Building	124	Beds
MUR12	Golden Cities Tract 28532 (SCO-004-066)	Single Family Residential	486.000	DU
MUR13	Health South Rehab Hospital (DP-2015-571)	Hospital	50	Beds

[1] SFDR = Single Family Detached Residential
[2] AC = Acres; DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; STU = Students

Due to the comprehensive nature of the list of cumulative projects, a reasonable absorption percentage was applied to the cumulative development projects for each analysis phase. An absorption of 75 percent has been assumed for EAPC (Phase 1 2021) traffic conditions and an absorption of 100 percent has been assumed for EAPC (Phase 2 Project Buildout 2025) traffic conditions.

Traffic Forecasts

To provide a comprehensive assessment of the deficiencies a "buildup" analysis was performed in support of this work effort. The "buildup" method was used to approximate E+P, EAP, and EAPC traffic conditions, and is intended to identify the near-term deficiencies on both the existing and planned near-term circulation system. The EAPC traffic condition includes background traffic, traffic generated by other cumulative development projects within the study area, and traffic generated by the proposed Project.

Near Term Conditions

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the EAP (Phase 1 2021), EAP (Phase 2 Project Buildout 2025), EAPC (Phase 1 2021), and EAPC (Phase 2 Project Buildout 2025) traffic conditions. An ambient growth factor of 6.12% accounts for background (area-wide) traffic increases that occur over time up to the year 2021 from the year 2018 (compounded 2 percent per year growth over a 3-year period) and 14.87% for year 2025 from the year 2018 (compounded 2 percent per year over a 7-year period). Phase 1 and Phase 2 Project traffic is added to assess EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) traffic conditions, respectively. Traffic volumes generated by cumulative development projects are then added to assess the EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) traffic conditions. The Phase 1 2021 roadway network is similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project. The Phase 2 Project Buildout 2025 roadway network is similar to the 2021 roadway network with the exception of the I-215 Freeway at Scott Road interchange improvements, which are assumed to be in place.

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

- EAP (2021)
  - o Existing 2018 counts

  - Ambient growth traffic (6.12%)
  - Phase 1 Project traffic
- EAP (2025)
  - Existing 2018 counts
  - Ambient growth traffic (14.87%)
  - Phase 1 and Phase 2 Project traffic
- EAPC (2021)
  - Existing 2018 counts
  - Ambient growth traffic (6.12%)
  - Cumulative Development Project traffic (75% absorption)
  - Phase 1 Project traffic
- EAPC (2025)
  - Existing 2018 counts
  - Ambient growth traffic (14.87%)
  - Cumulative Development Project traffic (100% absorption)
  - Phase 1 and Phase 2 Project traffic

Existing Plus Project (E+P) Traffic Conditions

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations, freeway mainline operations, and traffic signal warrant analyses. This analysis scenario has been provided for informational purposes only as Project impacts have been discerned from a comparison of Existing (2018) to EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) traffic conditions (per the County's traffic study guidelines).

Roadway Improvements

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 also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). These include the Project site adjacent roadways of Leon Road, Holland Road and Eucalyptus Road.
- In order to access the existing roadway network from the site, the Project Applicant will also construct a 32-foot paved roadway along Holland Road between Briggs Road and Leon Road.

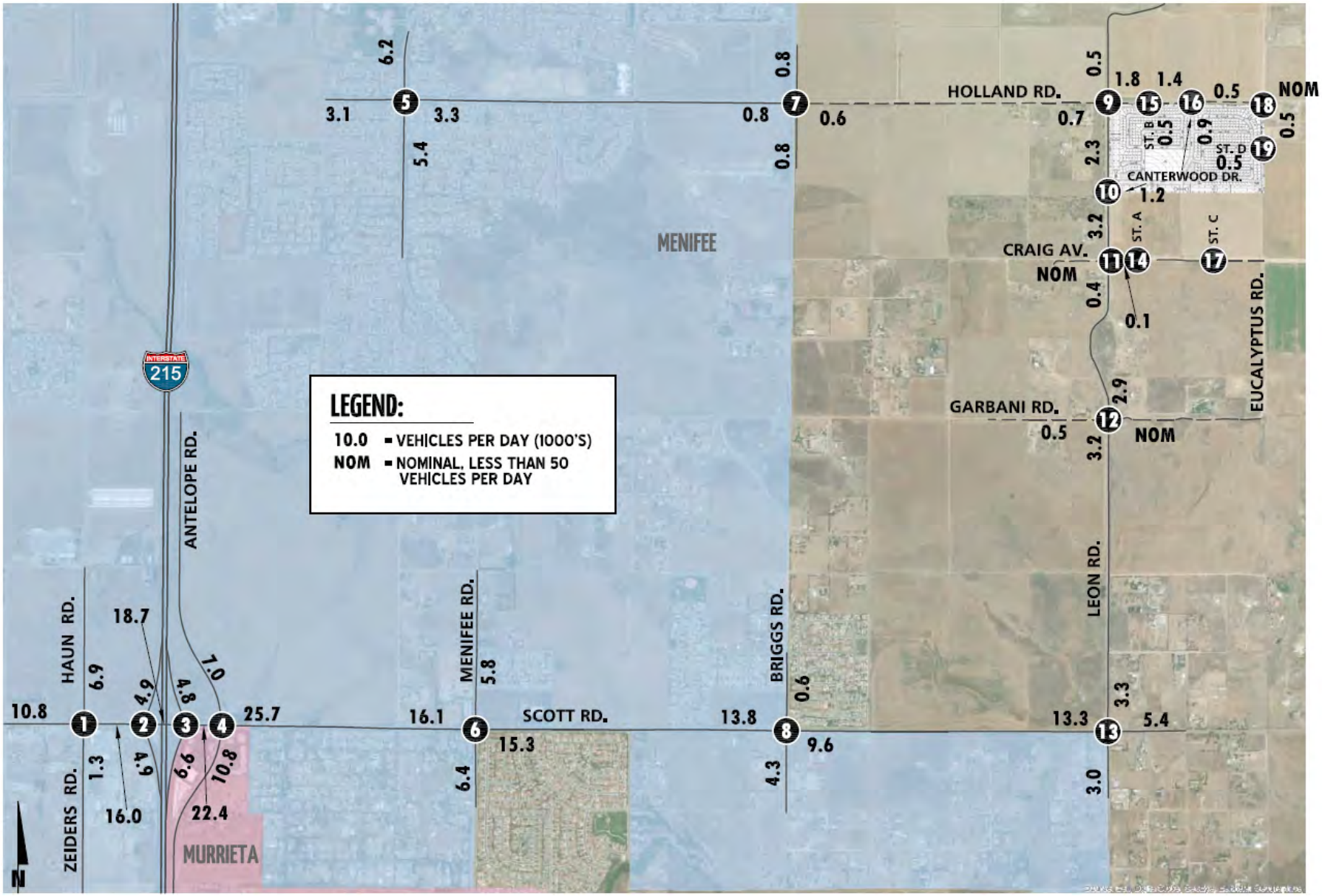
E+P (Phase 1) Traffic Volume Forecasts

This scenario includes Existing traffic volumes plus Project (Phase 1) traffic. **Figure 4.15-25, *E+P (Phase 1) Average Daily Traffic (ADT)*** shows the ADT volumes which can be expected for E+P (Phase 1) traffic conditions. E+P (Phase 1) weekday AM and weekday PM peak hour intersection turning movement volumes are shown on **Figure 4.15-26, *E+P (Phase 1) Traffic Volumes***.

E+P (Project Buildout) Traffic Volume Forecasts

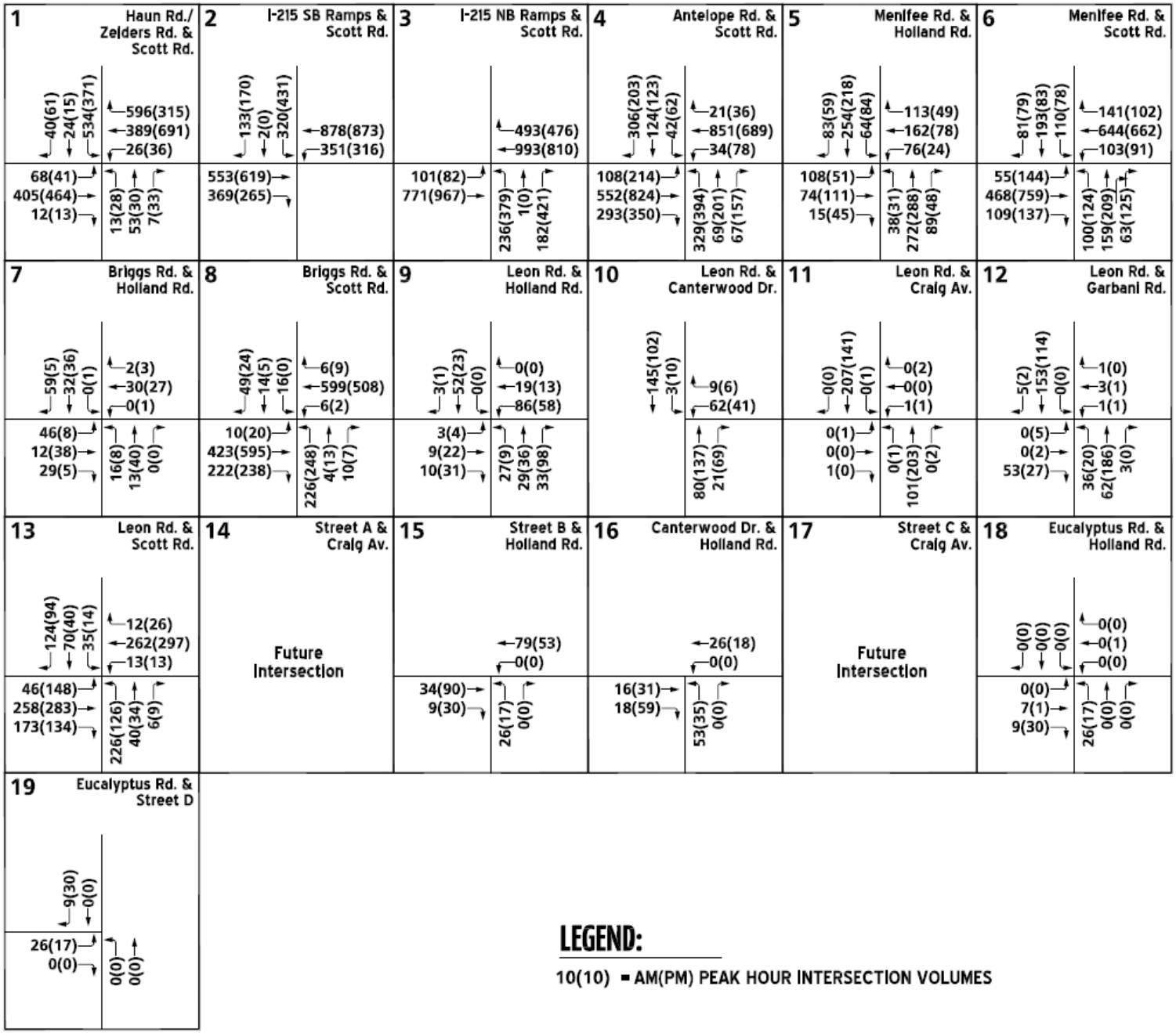
This scenario includes Existing traffic volumes plus Project (Buildout) traffic. **Figure 4.15-27, *E+P (Project Buildout) Average Daily Traffic (ADT)*** shows the ADT volumes which can be expected for E+P (Project Buildout) traffic conditions. E+P (Project Buildout) weekday AM and weekday PM peak hour intersection turning movement volumes are shown on **Figure 4.15-28, *E+P (Project Buildout) Traffic Volumes***.

FIGURE 4.15-25
E+P (PHASE 1) AVERAGE DAILY TRAFFIC (ADT)



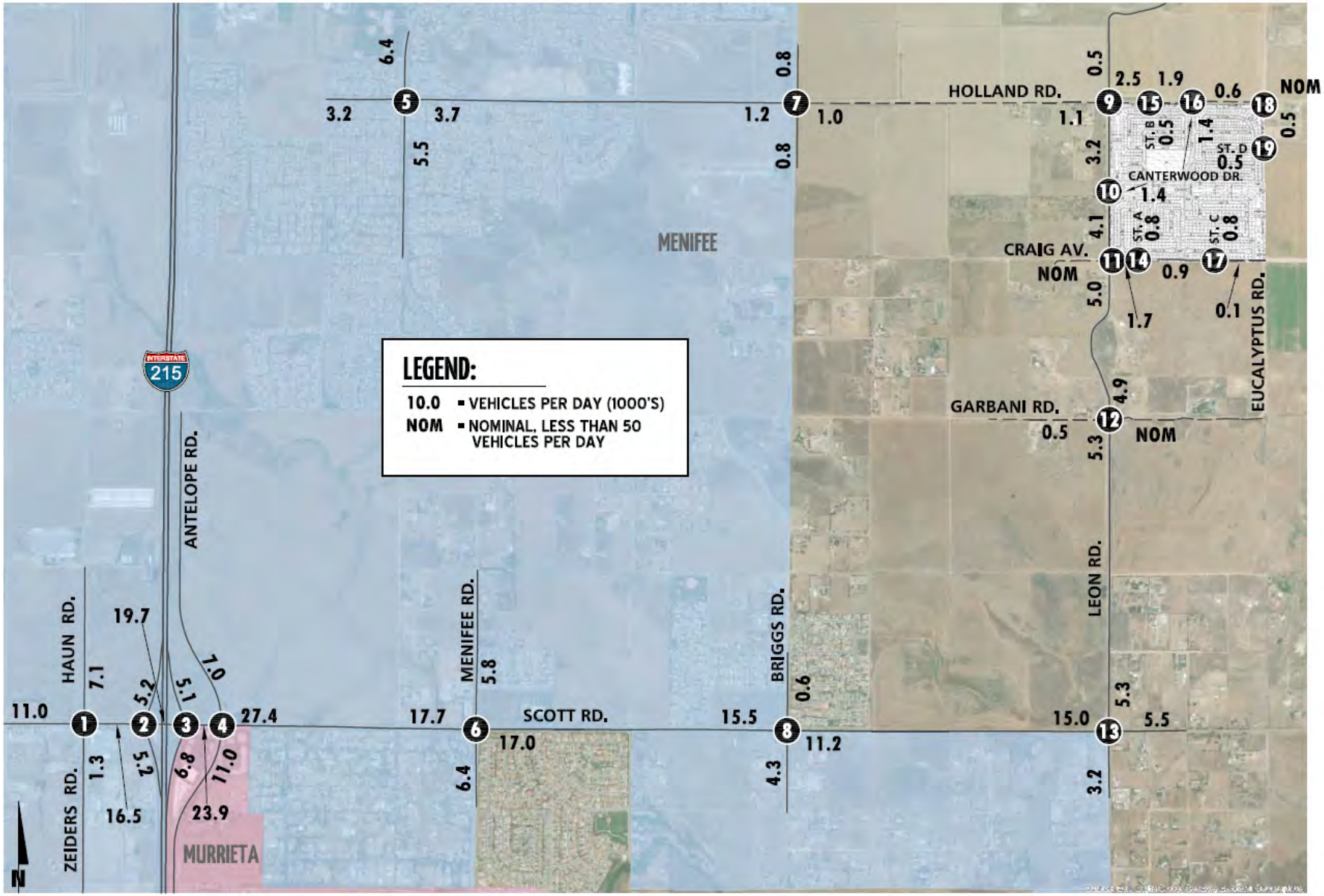
Source: TIA (**Appendix K**)

FIGURE 4.15-26
E+P (PHASE 1) TRAFFIC VOLUMES



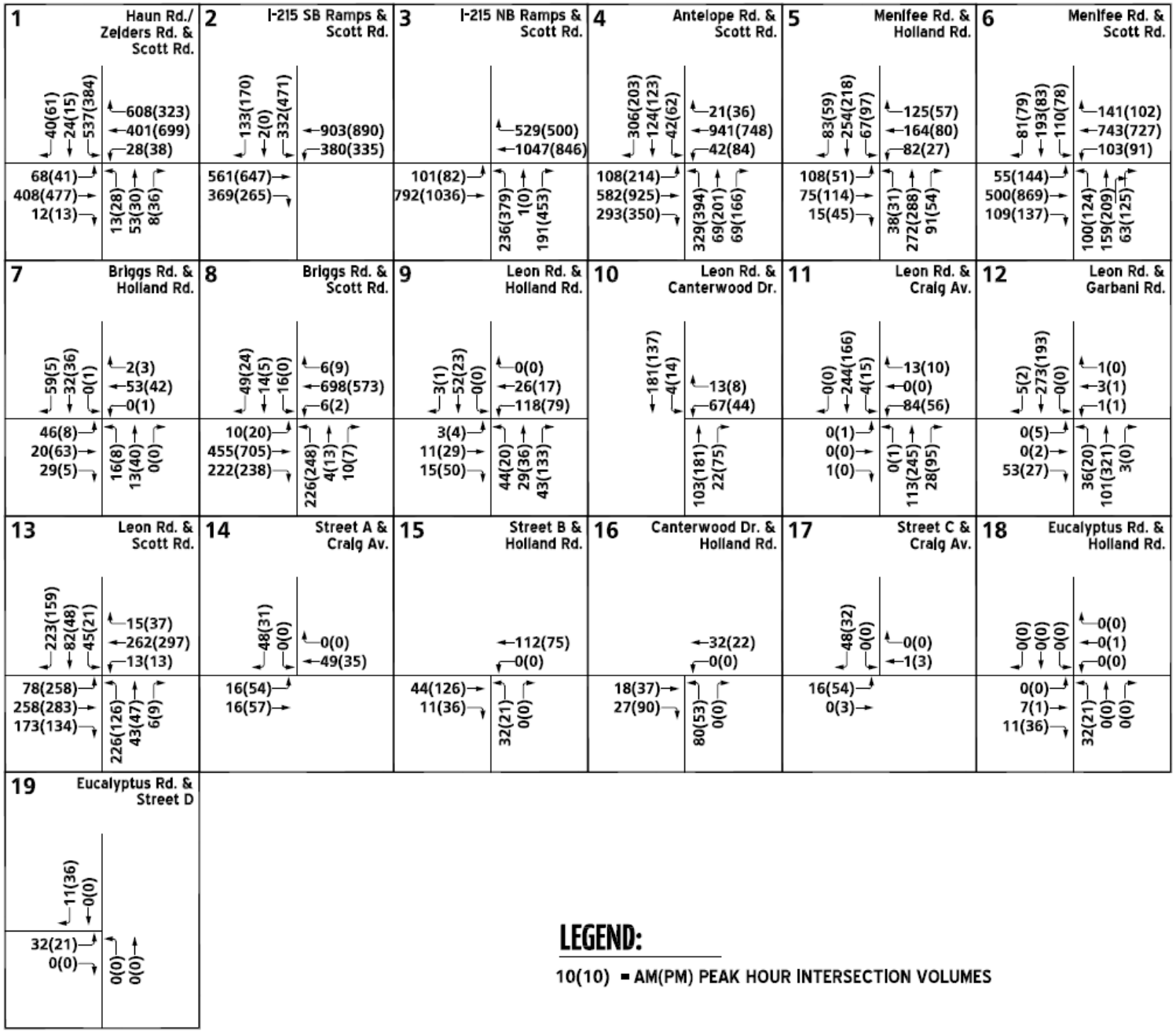
Source: TIA (**Appendix K**)

FIGURE 4.15-27
E+P (PROJECT BUILDOUT) AVERAGE DAILY TRAFFIC (ADT)



Source: TIA (**Appendix K**)

FIGURE 4.15-28
E+P (PROJECT BUILDOUT) TRAFFIC VOLUMES



Source: TIA (**Appendix K**)

Intersection Operations Analysis

E+P peak hour traffic operations have been evaluated for the 19 study area intersections based on the analysis methodologies presented in Section 4.15.1.2.

- *E+P (Phase 1)*

The intersection analysis results indicate that the addition of Project (Phase 1) traffic is anticipated to result in the following additional LOS deficiencies:

- Briggs Rd. & Scott Rd. (#8) – LOS F AM peak hour only; and
- Leon Rd. & Scott Rd. (#13) – LOS E PM peak hour only.

Figure 4.15-29, *E+P (Phase 1) Summary of LOS* summarizes the weekday AM and PM peak hour study area intersection LOS under E+P (Phase 1) traffic conditions, consistent with the summary provided in **Table 4.15-14, *Intersection Analysis for E+P Conditions***. The intersection operations analysis worksheets are included in Appendix 5.1 of the *TIA* for E+P (Phase 1) traffic conditions.

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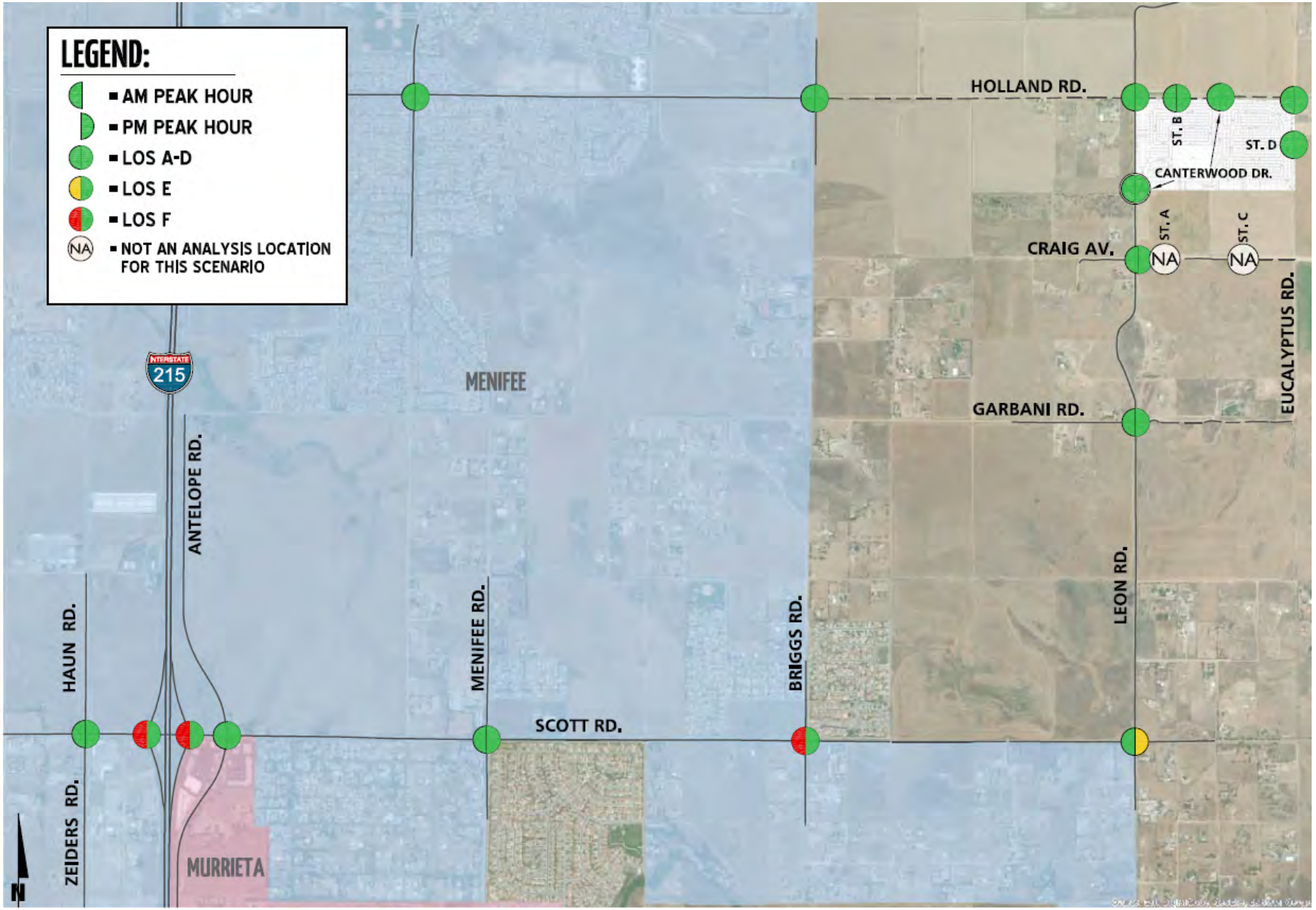
FIGURE 4.15-29
E+P (PHASE 1) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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Table 4.15-14
Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2018)				E+P (Phase 1)				E+P (Project Buildout)			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Haun Rd./Zeiders Rd. / Scott Rd.	TS	44.6	43.8	D	D	45.5	44.6	D	D	46.3	45.3	D	D
2	I-215 SB Ramps / Scott Rd.	TS	LOS E/F[3]				LOS E/F[3]				LOS E/F[3]			
3	I-215 NB Ramps / Scott Rd.	TS	LOS E/F[3]				LOS E/F[3]				LOS E/F[3]			
4	Antelope Rd. / Scott Rd.	TS	35.1	35.7	D	D	37.4	38.6	D	D	39.8	41.4	D	D
5	Menifee Rd. / Holland Rd.	AWS	17.9	11.6	C	B	18.5	11.8	C	B	19.1	12.1	C	B
6	Menifee Rd. / Scott Rd.	TS	32.1	34.5	C	C	32.8	37.1	C	D	34.2	39.4	C	D
7	Briggs Rd. / Holland Rd.	CSS	10.3	9.5	B	A	11.0	10.0	B	B	11.5	10.3	B	B
8	Briggs Rd. / Scott Rd.	TS	**186.6**	29.5	**F**	C	**187.5**	30.4	**F**	C	**190.5**	32.0	**F**	C
9	Leon Rd. / Holland Rd.	AWS	7.3	7.2	A	A	8.1	8.4	A	A	8.6	9.3	A	A
10	Leon Rd. / Canterwood Dr.	CSS	Future Intersection				10.4	10.7	B	B	11.0	11.6	B	B
11	Leon Rd. / Craig Av.	CSS	9.8	9.3	A	A	13.5	12.7	B	B	23.9	18.6	C	C
12	Leon Rd. / Garbani Rd.	CSS	9.5	9.6	A	A	11.1	12.6	B	B	12.8	16.6	B	C
13	Leon Rd. / Scott Rd.	AWS	16.5	14.5	C	B	28.6	**37.3**	D	**E**	**55.5**	**98.2**	**F**	**F**
14	St. A / Craig Av.	CSS	Future Intersection				Future Intersection				8.7	8.6	A	A
15	St. B / Holland Rd.	CSS	Future Intersection				9.3	9.5	A	A	9.6	10.0	A	B
16	Canterwood Dr. / Holland Rd.	CSS	Future Intersection				9.0	9.1	A	A	9.3	9.4	A	A
17	St. C / Craig Av.	CSS	Future Intersection				Future Intersection				8.5	8.4	A	A
18	Eucalyptus Rd. / Holland Rd.	CSS	Future Intersection				8.7	8.7	A	A	8.7	8.7	A	A
19	Eucalyptus Rd. / St. D	CSS	Future Intersection				8.6	8.7	A	A	8.7	8.7	A	A

BOLD = LOS does not meet the County, City of Menifee, City of Murrieta, or Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

[1] Per the Highway Capacity Manual 6, 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; CSS = Improvement

[3] Based on the constrained traffic count data, the intersection appears to operate at acceptable LOS or at LOS better than field observations would suggest. However, field observations show that the intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations.

- *E+P (Project Buildout)*

The intersection analysis results indicate that the addition of Project (Buildout) traffic is not anticipated to result in any additional LOS deficiencies, in addition to those previously identified above under Existing (2018) and E+P (Phase 1) traffic conditions.

Figure 4.15-30, *E+P (Project Buildout) Summary of LOS* summarizes the weekday AM and PM peak hour study area intersection LOS under E+P (Buildout) traffic conditions, consistent with the summary provided in **Table 4.15-14**. Appendix 5.2 of the *TIA* includes the intersection operations analysis worksheets for E+P (Project Buildout) traffic conditions.

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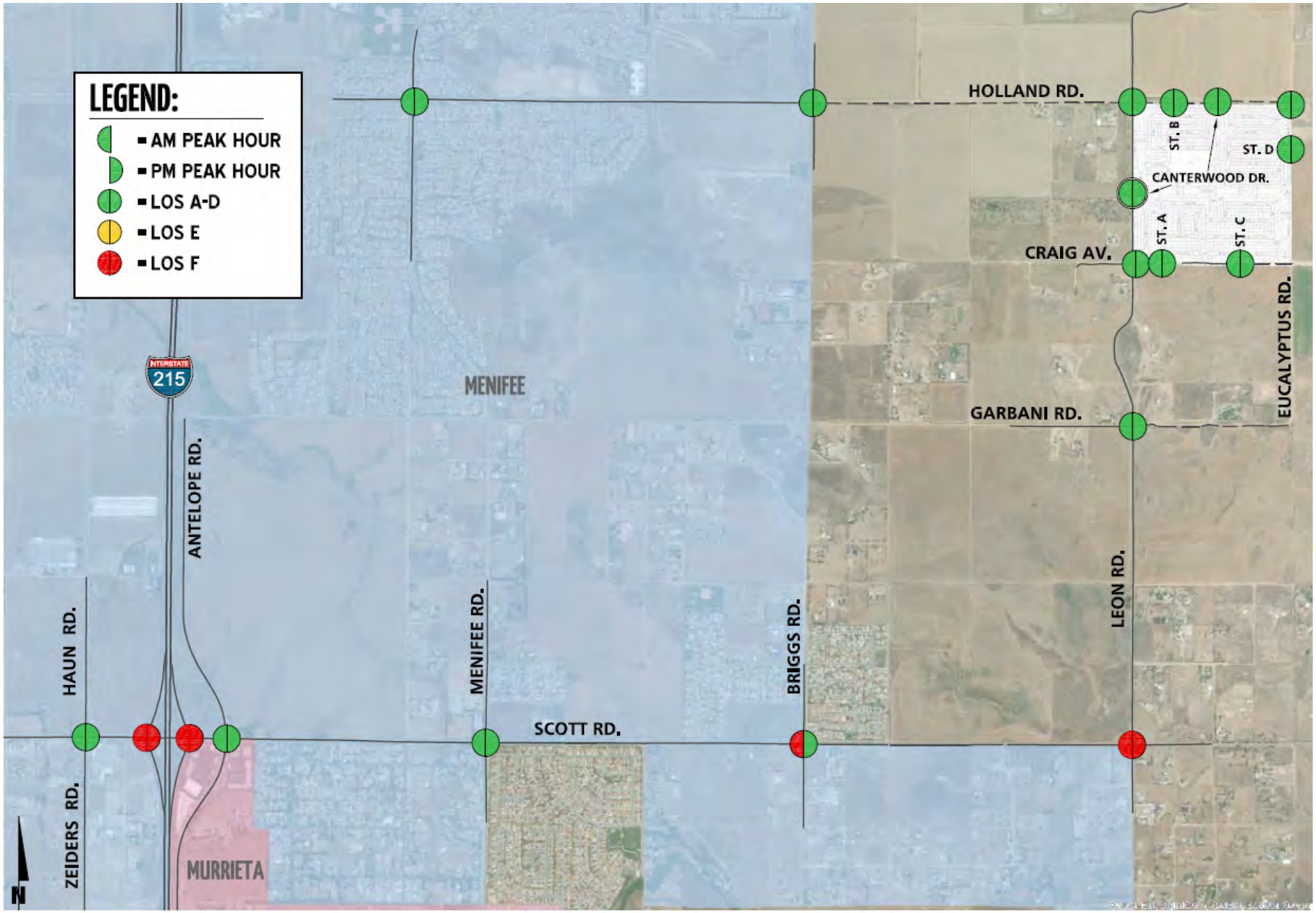
FIGURE 4.15-30
E+P (PROJECT BUILDOUT) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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Off-Ramp Queuing Analysis

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway at Scott Road 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 mainline. Queuing analysis findings are presented in **Table 4.15-15, *Peak Hour Freeway Off-Ramp Queuing Analysis for E+P Conditions***, for E+P traffic conditions, below. Off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline.

Table 4.15-15
Peak Hour Freeway Off-Ramp Queuing Analysis for E+P Conditions

Intersection	Movement	Available Stacking (Feet)	E+P (Phase 1)				E+P (Project Buildout)			
			95th Percentile Stacking Distance Required (Feet)		Acceptable?[1]		95th Percentile Stacking Distance Required (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Scott Road										
	SBL/T	1,300	374[2]	504[2]	Yes	Yes	393[2]	570[2]	Yes	Yes
	SBR	460	49	53	Yes	Yes	49	57	Yes	Yes
I-215 NB Off-Ramp / Scott Road										
	NBL/T	1,560	276[2]	399[2]	Yes	Yes	276[2]	399[2]	Yes	Yes
	NBR	400	61	350[2]	Yes	Yes	62	426[2]	Yes	Yes[3]

[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] The 95th percentile queues indicate potential queuing for the movements and peak hours identified above. However, while the potential queues would exceed the turn pocket lengths and could spillback into the adjacent through lanes, none are anticipated to result in spillback onto the I-215 Freeway mainline since the adjacent through lanes all have sufficient capacity.

As shown on **Table 4.15-15**, and consistent with Existing traffic conditions, there are no potential queuing issues anticipated during the weekday AM or PM peak 95th percentile traffic flows for E+P traffic conditions. Worksheets for E+P (Phase 1) conditions off-ramp queuing analysis are provided in Appendix 5.3 of the *TIA*, and worksheets for E+P (Project Buildout) conditions off-ramp queuing analysis are provided in Appendix 5.4 of the *TIA*.

Traffic Signal Warrants Analysis

As shown in **Table 4.15-16, *E+P Traffic Signal Warrants***, there are no additional study area intersections anticipated to warrant a traffic signal beyond those previously warranted under Existing conditions (see Appendix 5.5 and Appendix 5.6 of the *TIA*).

Table 4.15-16
E+P Traffic Signal Warrants

#	Intersection	Existing 2018	E+P Phase 1	E+P Phase 2
5	Menifee Rd. / Holland Rd.	PH		
7	Briggs Rd. / Holland Rd.			
9	Leon Rd. / Holland Rd.			
10	Leon Rd. / Canterwood Dr.	DNE		
11	Leon Rd. / Craig Av.			
12	Leon Rd. / Garbani Rd.			
13	Leon Rd. / Scott Rd.	PH		
14	St. A / Craig Av.	DNE	DNE	
15	St. B / Holland Rd.	DNE		
16	Canterwood Dr. / Holland Rd.	DNE		
17	St. C / Craig Av.	DNE	DNE	
18	Eucalyptus Rd. / Holland Rd.	DNE		
19	Eucalyptus Rd. / St. D	DNE		

PH = Peak Hour Warrant Met; X = Daily Volume Warrant Met; DNE = Does Not Exist.

Basic Freeway Segment Analysis

- *E+P (Phase 1)*

E+P (Phase 1) mainline directional volumes for the weekday AM and PM peak hours are provided on **Figure 4.15-31, *E+P (Phase 1) Freeway Mainline Volumes***.

FIGURE 4.15-31
E+P (PHASE 1) FREEWAY MAINLINE VOLUMES

Source: TIA (**Appendix K**)

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As shown on **Table 4.15-17, *Basic Freeway Segment Analysis for E+P Conditions***, the freeway mainline segment analysis indicates that the addition of Phase 1 traffic is anticipated to result in the same LOS deficiencies as those identified under Existing (2018) conditions:

- I-215 Freeway Southbound – North of Scott Road (#1) – LOS E AM peak hour only; and
- I-215 Freeway Southbound – South of Scott Road (#2) – LOS F AM peak hour only.

Table 4.15-17
Basic Freeway Segment Analysis for E+P Conditions

Freeway	Direction	Mainline Segment	Lanes[1]	Existing (2018)				E+P (Phase 1)				E+P (Project Buildout)			
				Density[2]		LOS[3]		Density[2]		LOS[3]		Density[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	Southbound	North of Scott Road	3	**41.8**	31.9	**E**	D	**42.1**	32.4	**E**	D	**42.2**	32.8	**E**	D
		South of Scott Road	3	**44.6**	31.9	**E**	D	--[4]	32.2	**F**	D	--[4]	32.3	**F**	D
	Northbound	North of Scott Road	3	18.3	29.6	C	D	18.5	29.9	C	D	18.7	30.1	C	D
		South of Scott Road	3	17.4	31.7	B	D	17.5	32.0	B	D	17.6	32.3	B	D

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] LOS = Level of Service
[4] HCS7 does not report density for freeway facilities operating at LOS F.

E+P (Phase 1) basic freeway segment analysis worksheets are provided in Appendix 5.7 of the *TIA*.

- *E+P (Project Buildout)*

E+P (Buildout) mainline directional volumes for the weekday AM and PM peak hours are provided on **Figure 4.15-32, *E+P (Project Buildout) Freeway Mainline Volumes***. As shown on **Table 4.15-17**, above, the freeway mainline segment analysis indicates that the addition of Buildout traffic is not anticipated to result in any additional LOS deficiencies, in addition to those listed under Existing (2018) and E+P (Phase 1) conditions. E+P (Project Buildout) basic freeway segment analysis worksheets are provided in Appendix 5.8 of the *TIA*.

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FIGURE 4.15-32
E+P (PROJECT BUILDOUT) FREEWAY MAINLINE VOLUMES

Source: TIA (**Appendix K**)

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Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for E+P conditions and the results of this analysis are presented in **Table 4.15-18, *Freeway Ramp Merge/Diverge Analysis for E+P Conditions***, below.

Table 4.15-18
Freeway Ramp Merge/Diverge Analysis for E+P Conditions

Freeway	Direction	Ramp Junction	Lanes on Freeway	Existing (2018)				E+P (Phase 1)				E+P (Project Buildout)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
I-215 Freeway	Southbound	Off-Ramp at Scott Road	3	**36.3**	**E**	31.2	D	**36.5**	**E**	**31.5**	**E**	**36.5**	**E**	**31.8**	**E**
		On-Ramp at Scott Road	3	**43.4**	**E**	33.3	D	--[3]	**F**	33.5	D	--[3]	**F**	33.7	D
	Northbound	On-Ramp at Scott Road	3	20.5	C	31.7	D	20.8	C	31.9	D	21.0	C	32.1	D
		Off-Ramp at Scott Road	3	18.9	C	32.0	D	19.0	C	**32.3**	**E**	19.0	C	**32.5**	**E**

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] LOS = Level of Service.
[4] HCS7 does not report density for freeway facilities operating at LOS F.

- *E+P (Phase 1)*

As shown in **Table 4.15-18**, above, the following additional ramp merge/diverge areas are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under E+P (Phase 1) traffic conditions:

- I-215 Freeway – Southbound, Off-Ramp at Scott Road (#1) – LOS E AM and PM peak hours;
- I-215 Freeway – Southbound, On-Ramp at Scott Road (#4) – LOS F AM peak hour only; and
- I-215 Freeway – Northbound, Off-Ramp at Scott Road (#6) – LOS E PM peak hour only.

E+P (Phase 1) freeway ramp merge/diverge operations analysis worksheets are provided in Appendix 5.9 of the *TIA*.

- *E+P (Project Buildout)*

As shown in **Table 4.15-18**, above, the freeway ramp merge/diverge analysis indicates that the addition of Project Buildout traffic is not anticipated to result in any new LOS deficiencies, in addition to those listed under Existing (2018) and E+P (Phase 1) conditions. E+P (Project Buildout) freeway ramp merge/diverge operations analysis worksheets are provided in Appendix 5.10 of the *TIA*.

Deficiencies and Recommended Improvements

- *Intersections*

Improvement strategies have been recommended at intersections that have been identified as deficient 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 improvements is presented in **Table 4.15-19, *Intersection Analysis for E+P Conditions with Improvements***, for E+P traffic conditions. Improvements to address deficiencies for E+P (Phase 1) and E+P (Project Buildout) traffic conditions are described below.

Table 4.15-19
Intersection Analysis for E+P Conditions with Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		LOS	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
2	I-215 SB Ramps / Scott Rd.																	
	Phase 1																	
	- Without Improvements	TS	0	0	0	0	1	1	0	1	1	1	1	0	LOS E/F[4]			
	- With Improvements		I-215/Scott Road Interchange Improvements												Acceptable LOS[5]			
	Project Buildout																	
	- Without Improvements	TS	0	0	0	0	1	1	0	1	1	1	1	0	LOS E/F[4]			
	- With Improvements		I-215/Scott Road Interchange Improvements												Acceptable LOS[5]			
3	I-215 NB Ramps / Scott Rd.																	
	Phase 1																	
	- Without Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	1	LOS E/F[4]			
	- With Improvements		I-215/Scott Road Interchange Improvements												Acceptable LOS[5]			
	Project Buildout																	
	- Without Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	1	LOS E/F[4]			
	- With Improvements		I-215/Scott Road Interchange Improvements												Acceptable LOS[5]			
8	Briggs Rd. / Scott Rd.																	
	Phase 1																	
	- Without Improvements	TS	0	1	d	0	1	1	1	2	0	1	2	1	**187.5**	30.4	**F**	C
	- With Improvements	TS	**1**	1	**0**	0	1	1	1	2	0	1	2	1	29.6	30.3	C	C
	Project Buildout																	
	- Without Improvements	TS	0	1	d	0	1	1	1	2	0	1	2	1	**190.5**	32.0	**F**	C
	- With Improvements	TS	**1**	1	**0**	0	1	1	1	2	0	1	2	1	30.2	31.9	C	C
13	Leon Rd. / Scott Rd.																	
	Phase 1																	
	- Without Improvements	AWS	0	1	0	0	1	0	0	1	0	0	1	0	28.6	**37.3**	D	**E**
	- With Improvements	**TS**	0	1	0	0	1	0	0	1	0	0	1	0	11.0	11.0	B	B
	Project Buildout																	
	- Without Improvements	AWS	0	1	0	0	1	0	0	1	0	0	1	0	**55.5**	**98.2**	**F**	**F**
	- With Improvements	**TS**	0	1	0	0	1	0	0	1	0	0	1	0	13.2	14.2	B	B

BOLD = LOS does not meet the County, City of Menifee, City of Murrieta, or Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

NOTE: All recommended improvements described above are consistent with the General Plan designations of the respective jurisdictions in which they are located.

[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 Highway Capacity Manual 6, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control.

[3] AWS = All-Way Stop; TS = Traffic Signal; TS = Improvement.

[4] Based on the constrained traffic count data, the intersection appears to operate at acceptable LOS or at LOS better than field observations would suggest. However, field observations show that the intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations.

[5] As demonstrated on the subsequent Table 4.15-31, the study area intersections are anticipated to operate at acceptable LOS with the planned I-215 Freeway at Scott Road (Phase 1) interchange improvements in place.

Deficiencies and the required improvements can be addressed in four (4) manners. First, the Project can make the entire improvement. Second is payment of TUMF. As discussed above, all projects, including this Project are subject to TUMF. Payment of the TUMF is required and is not considered unique mitigation under CEQA (reference **Standard Condition SC-TR-1**, in Section 4.15.5). The third is payment of DIF. Similar to TUMF, Payment of the DIF is required and is not considered unique mitigation under CEQA (reference **Standard Condition SC-PS-1**, in Section 4.15.5). Fourth, the Project can make a fair share contribution to the improvement. This contribution is commensurate with the Project impact in relation to other factors (existing condition, ambient growth and cumulative growth).

Payment of TUMF, DIF and fair share contribution are considered adequate mitigation under CEQA in order to reduce impacts to a less than significant level. **Mitigation Measure MM-TR-4** and **MM-TR-5** (see Section 4.15.5) shall be implemented to address this issue.

Improvement – Briggs Road & Scott Road (#8) – This intersection is currently operating at an unacceptable LOS and the addition of Project traffic is anticipated to contribute to the existing deficiency. As such, the impact is cumulatively considerable. The Project shall contribute fair share funding towards widening and constructing a dedicated northbound left turn lane and a shared through-right turn lane (consistent with Existing conditions). The Project will be required to implement **Standard Condition SC-TR-1**, **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

Improvement – Leon Road & Scott Road (#13) – This intersection currently operates at an acceptable LOS under Existing traffic conditions and is anticipated to operate at a deficient LOS with the addition of Project traffic. As such, the impact is considered significant. The Project shall install a traffic signal and shall pay fair share funding. The Project will be required to implement **Standard Condition SC-TR-1**, **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

Worksheets for E+P (Phase 1) and E+P (Project Buildout) conditions, with improvements, HCM calculations are provided in Appendix 5.11 and Appendix 5.12 of the *TIA*, respectively.

- *Freeway Facilities*

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the E+P (Phase 1) and E+P (Project Buildout) deficiencies on the SHS.

Existing Plus Ambient Growth Plus Project (EAP) Traffic Conditions

This section discusses the methods used to develop Existing Plus Ambient Growth Plus Project (EAP) traffic forecasts, and the resulting intersection operations, freeway mainline operations, and traffic signal warrant analyses.

Roadway Improvements

The lane configurations and traffic controls assumed to be in place for EAP conditions are consistent with the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAP conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). These include the Project site adjacent roadways of Leon Road, Holland Road, and Eucalyptus Road.
- In order to access the existing roadway network from the site, the Project Applicant will also construct a 32-foot paved roadway along Holland Road between Briggs Road and Leon Road.

EAP (Phase 1 2021) Traffic Volume Forecasts

This scenario includes Existing traffic volumes plus an ambient growth factor of 6.12% and the addition of Project (Phase 1) traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAP (Phase 1 2021) traffic conditions are shown on **Figure 4.15-33, EAP (*Phase 1 2021) Average Daily Traffic (ADT)***, and **Figure 4.15-34, *EAP (Phase 1 2021) Traffic Volumes***.

EAP (Phase 2 Project Buildout 2025) Traffic Volume Forecasts

This scenario includes Existing traffic volumes, an ambient growth factor of 14.87%, and the addition of Phase 2 Project Buildout traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAP (Phase 2 Project Buildout 2025) traffic conditions are shown on **Figure 4.15-35, EAP (*Phase 2 Project Buildout 2025) Average Daily Traffic (ADT)***, and **Figure 4.15-36, *EAP (Phase 2 Project Buildout 2025) Traffic Volumes***.

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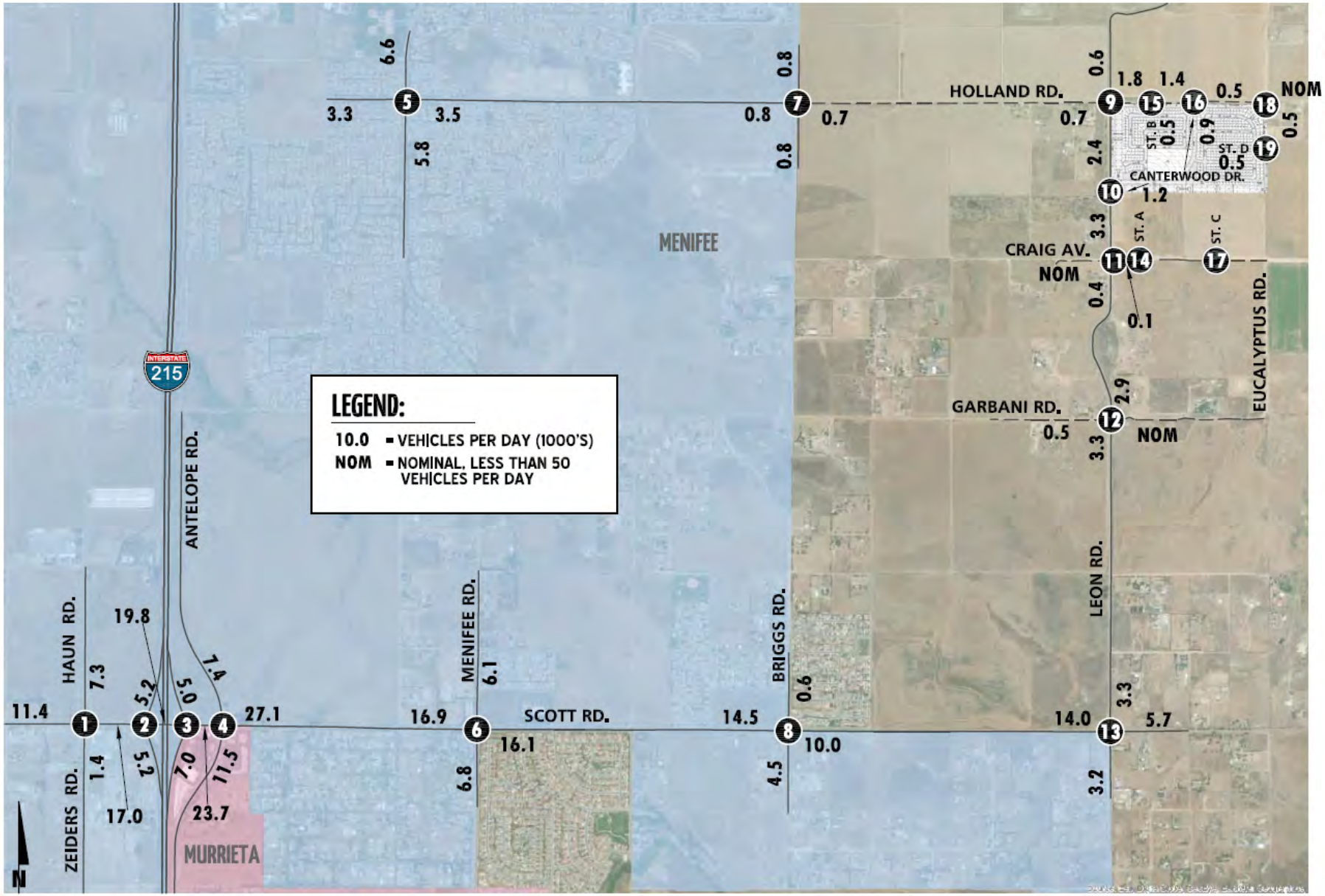
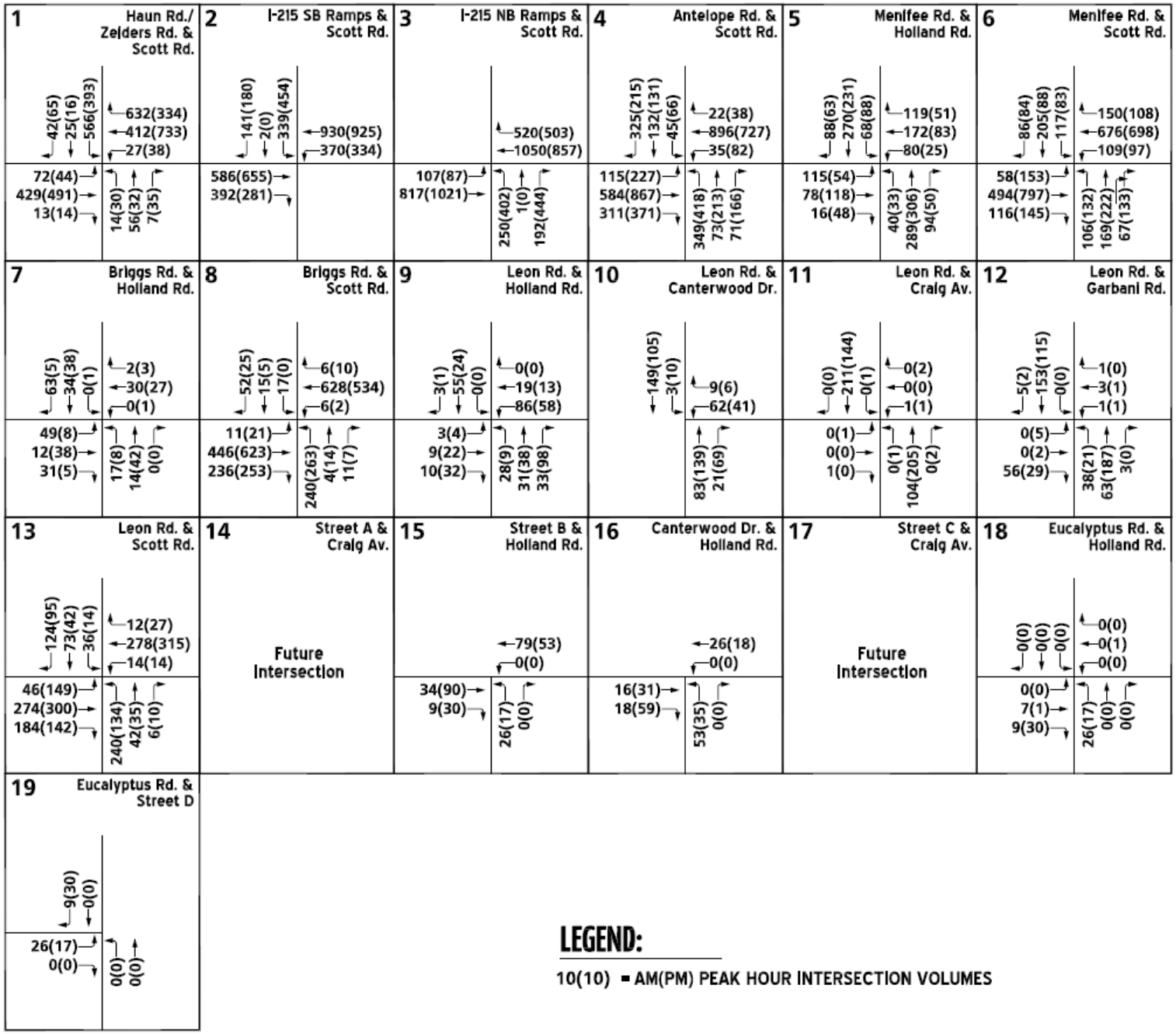
FIGURE 4.15-33
EAP (PHASE 1 2021) AVERAGE DAILY TRAFFIC (ADT)



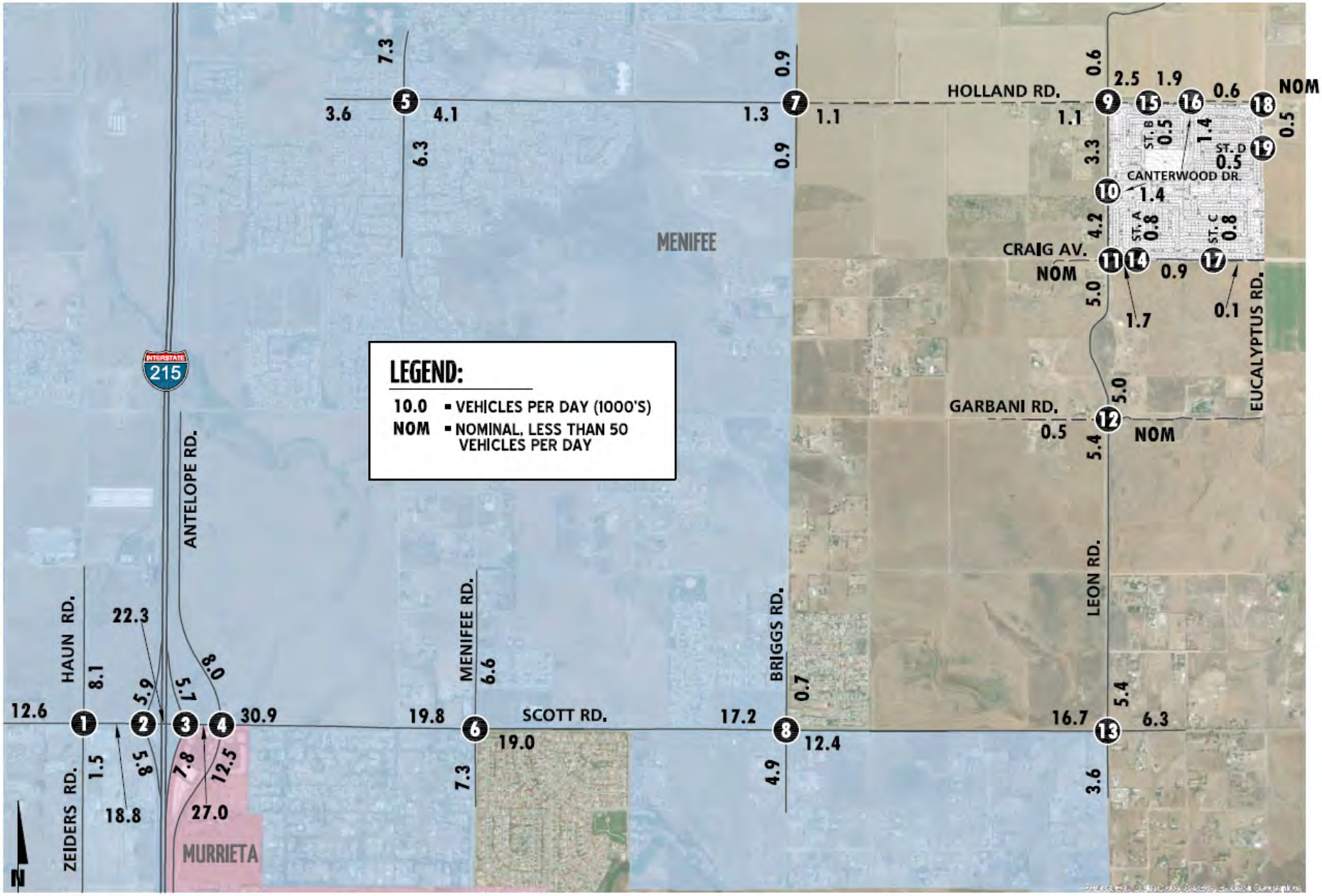
Source: TIA (**Appendix K**)

FIGURE 4.15-34
EAP (PHASE 1 2021) TRAFFIC VOLUMES



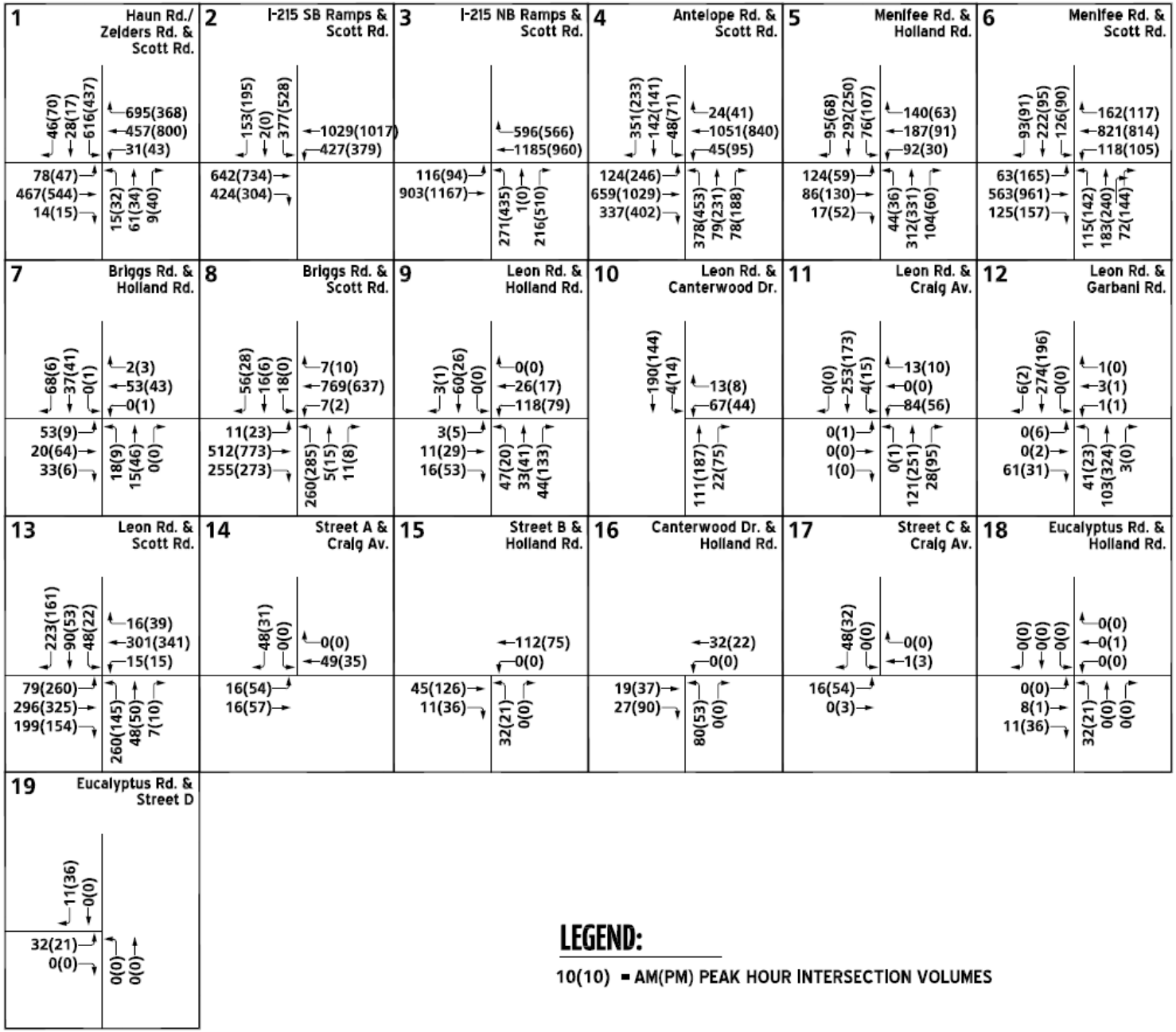
Source: TIA (**Appendix K**)

FIGURE 4.15-35
EAP (PHASE 2 PROJECT BUILDOUT 2025) AVERAGE DAILY TRAFFIC (ADT)



Source: TIA (**Appendix K**)

FIGURE 4.15-36
EAP (PHASE 2 PROJECT BUILDOUT 2025) TRAFFIC VOLUMES



Source: TIA (**Appendix K**)

Intersection Operations Analysis

LOS calculations were conducted for the study intersections to evaluate their operations under EAP traffic conditions with roadway and intersection geometrics consistent with the roadway improvements discussed above.

- *EAP (Phase 1 2021)*

The intersection analysis results are summarized in **Table 4.15-20, *Intersection Analysis for EAP Conditions***, below, which indicates that the following study area intersection is anticipated to operate at an unacceptable LOS under EAP (Phase 1 2021) traffic conditions:

- Briggs Rd. & Scott Rd. (#8) – LOS F AM peak hour only; and
- Leon Rd. & Scott Rd. (#13) – LOS E AM and PM peak hours.

Table 4.15-20
Intersection Analysis for EAP Conditions

#	Intersection	Traffic Control[2]	Existing (2018)				EAP (Phase 1 2021)				EAP (Phase 2 Project Buildout 2025)			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Haun Rd./Zeiders Rd. / Scott Rd.	TS	44.6	43.8	D	D	48.2	48.3	D	D	**55.7**	**58.9**	E	E
2	I-215 SB Ramps / Scott Rd.	TS	LOS E/F[3]				LOS E/F[3]				LOS E/F[3]			
3	I-215 NB Ramps / Scott Rd.	TS	LOS E/F[3]				LOS E/F[3]				LOS E/F[3]			
4	Antelope Rd. / Scott Rd.	TS	35.1	35.7	D	D	40.0	41.9	D	D	50.5	53.0	D	D
5	Menifee Rd. / Holland Rd.	AWS	17.9	11.6	C	B	20.8	12.5	C	B	26.8	13.6	D	B
6	Menifee Rd. / Scott Rd.	TS	32.1	34.5	C	C	34.0	39.1	C	D	34.4	46.5	C	D
7	Briggs Rd. / Holland Rd.	CSS	10.3	9.5	B	A	11.2	10.1	B	B	12.2	10.5	B	B
8	Briggs Rd. / Scott Rd.	TS	**186.6**	29.5	F	C	**191.6**	31.0	F	C	**191.8**	33.9	F	C
9	Leon Rd. / Holland Rd.	AWS	7.3	7.2	A	A	8.1	8.4	A	A	8.7	9.4	A	A
10	Leon Rd. / Canterwood Dr.	CSS	Future Intersection				10.5	10.8	B	B	11.2	11.7	B	B
11	Leon Rd. / Craig Av.	CSS	9.8	9.3	A	A	13.7	12.8	B	B	25.7	19.1	D	C
12	Leon Rd. / Garbani Rd.	CSS	9.5	9.6	A	A	11.2	12.7	B	B	13.1	17.1	B	C
13	Leon Rd. / Scott Rd.	AWS	16.5	14.5	C	B	**41.7**	**49.0**	E	E	**>100.0**	**>100.0**	F	F
14	St. A / Craig Av.	CSS	Future Intersection				Future Intersection				8.7	8.6	A	A
15	St. B / Holland Rd.	CSS	Future Intersection				9.3	9.5	A	A	9.6	10.0	A	B
16	Canterwood Dr. / Holland Rd.	CSS	Future Intersection				9.0	9.1	A	A	9.3	9.4	A	A
17	St. C / Craig Av.	CSS	Future Intersection				Future Intersection				8.5	8.4	A	A
18	Eucalyptus Rd. / Holland Rd.	CSS	Future Intersection				8.7	8.7	A	A	8.7	8.7	A	A
19	Eucalyptus Rd. / St. D	CSS	Future Intersection				8.6	8.7	A	A	8.7	8.7	A	A

BOLD = LOS does not meet the County, City of Menifee, City of Murrieta, or Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

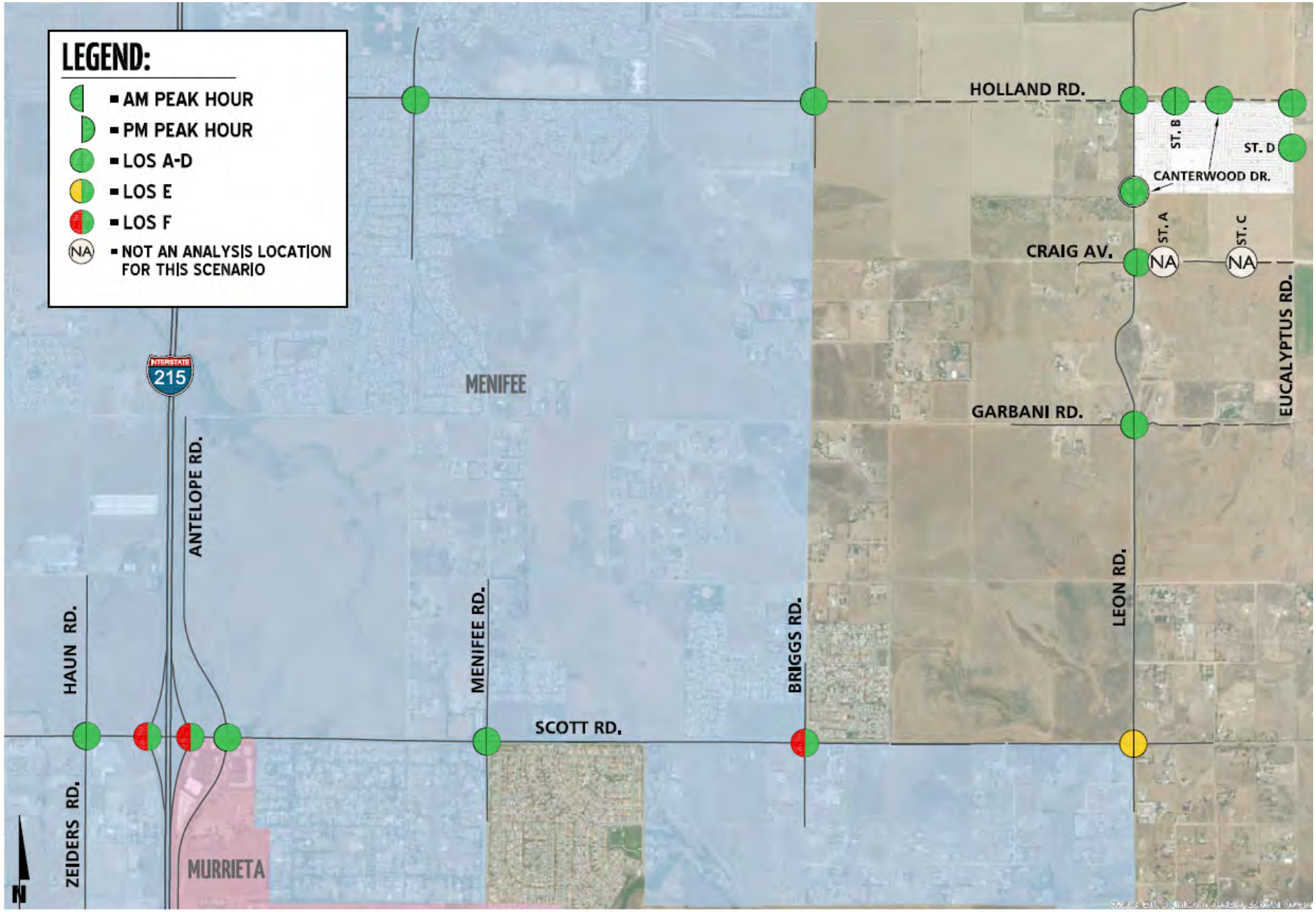
[1] Per the Highway Capacity Manual 6, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; CSS = Improvement

[3] Based on the constrained traffic count data, the intersection appears to operate at acceptable LOS or at LOS better than field observations would suggest. However, field observations show that the intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations.

Figure 4.15-37, *EAP (Phase I 2021) Summary of LOS* summarizes the weekday AM and PM peak hour study area intersection LOS under EAP (Phase 1 2021) traffic conditions, consistent with the summary provided in **Table 4.15-20**, above. The intersection operations analysis worksheets for EAP (Phase 1 2021) conditions are included in Appendix 6.1 of the *TIA*.

FIGURE 4.15-37
EAP (PHASE I 2021) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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- *EAP (Phase 2 Project Buildout 2025)*

As shown on **Table 4.15-20**, and illustrated on **Figure 4.15-38, *EAP (Phase 2 Project Buildout 2025) Summary of LOS***, the following additional study area intersection is anticipated to operate at unacceptable LOS for EAP (Phase 2 Project Buildout 2025) traffic conditions in addition to those previously identified under Existing (2018) and EAP (Phase 1 2021) conditions:

- Haun Rd./Zeiders Rd. & Scott Rd. (#1) – LOS E AM and PM peak hours

The intersection operations analysis worksheets for EAP (Phase 2 Project Buildout 2025) traffic conditions are included in Appendix 6.2 of the *TIA*.

Similar to Existing traffic conditions, the constrained traffic count data at the I-215 Northbound ramps on Scott Road results in the ramp-to-arterial intersections appearing to operate at acceptable LOS. Field observations show that this intersection and others along Scott Road between the I-215 Freeway and Briggs Road experience peak hour queues that periodically affect intersection operations.

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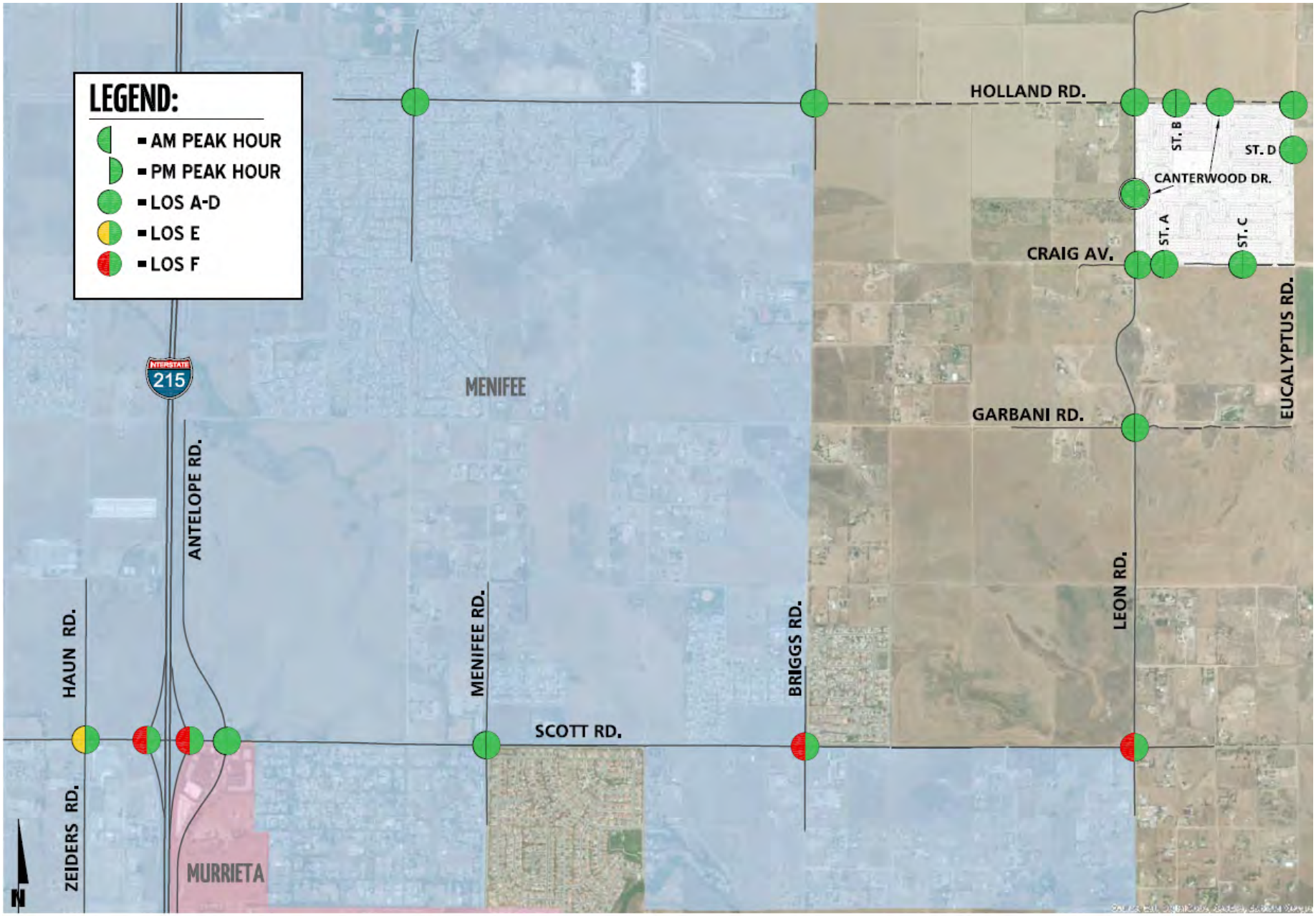
FIGURE 4.15-38
EAP (PHASE 2 PROJECT BUILDOUT 2025) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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Off-Ramp Queuing Analysis

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway at Scott Road 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 mainline. Queuing analysis findings are presented in **Table 4.15-21, *Peak Hour Freeway Off-Ramp Queuing Analysis for EAP Conditions***, below, for EAP traffic conditions. Off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline.

Table 4.15-21
Peak Hour Freeway Off-Ramp Queuing Analysis for EAP Conditions

Intersection	Movement	Available Stacking (Feet)	EAP (Phase 1 2021)				EAP (Phase 2 Project Buildout 2025)			
			95th Percentile Stacking Distance Required (Feet)		Acceptable? [1]		95th Percentile Stacking Distance Required (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Scott Road										
	SBL/T	1,300	406 [2]	542 [2]	Yes	Yes	472 [2]	663 [2]	Yes	Yes
	SBR	460	51	74	Yes	Yes	77	106	Yes	Yes
I-215 NB Off-Ramp / Scott Road										
	NBL/T	1,560	302 [2]	438 [2]	Yes	Yes	337 [2]	491 [2]	Yes	Yes
	NBR	400	62	405 [2]	Yes	Yes	71	555 [2]	Yes	Yes[3]

[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] The 95th percentile queues indicate potential queuing for the movements and peak hours identified above. However, while the potential queues would exceed the turn pocket lengths and could spillback into the adjacent through lanes, none are anticipated to result in spillback onto the I-215 Freeway mainline since the adjacent through lanes all have sufficient capacity.

As shown on **Table 4.15-21**, and consistent with Existing traffic conditions, there are no potential queuing issues anticipated during the weekday AM or PM peak 95th percentile traffic flows for EAP traffic conditions. Worksheets for EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) traffic conditions off-ramp queuing analysis are provided in Appendix 6.3 and Appendix 6.4, of the *TIA*, respectively.

Traffic Signal Warrants Analysis

Traffic signal warrants have been performed on unsignalized intersections that have not warranted a signal under Existing conditions for EAP traffic conditions. As shown in **Table 4.15-22, *EAP Traffic Signal Warrants***, there are no additional study area intersections anticipated to warrant a traffic signal for EAP (Phase 1 2021) or EAP (Phase 2 Project Buildout 2025) traffic conditions in addition to those previously warranted under Existing (2018) traffic conditions (see Appendix 6.5 and Appendix 6.6 of the *TIA*).

Table 4.15-22
EAP Traffic Signal Warrants

#	Intersection	Existing 2018	EAP Phase 1 2021	EAP Phase 2 Project Buildout 2025
5	Menifee Rd. / Holland Rd.	PH		
7	Briggs Rd. / Holland Rd.			
9	Leon Rd. / Holland Rd.			
10	Leon Rd. / Canterwood Dr.	DNE		
11	Leon Rd. / Craig Av.			
12	Leon Rd. / Garbani Rd.			
13	Leon Rd. / Scott Rd.	PH		
14	St. A / Craig Av.	DNE	DNE	
15	St. B / Holland Rd.	DNE		
16	Canterwood Dr. / Holland Rd.	DNE		
17	St. C / Craig Av.	DNE	DNE	
18	Eucalyptus Rd. / Holland Rd.	DNE		
19	Eucalyptus Rd. / St. D	DNE		

PH = Peak Hour Warrant Met; X = Daily Volume Warrant Met;
DNE = Does Not Exist.

Basic Freeway Segment Analysis

- *EAP (Phase 1 2021)*

EAP (Phase 1 2021) peak hour mainline directional volumes are provided on **Figure 4.15-37**. As shown on **Table 4.15-23, *Basic Freeway Segment Analysis for EAP Conditions***, the following additional freeway mainline segment is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 1 2021) traffic conditions:

- I-215 Freeway Southbound – North of Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour;
- I-215 Freeway Southbound – South of Scott Road (#2) – LOS F AM peak hour; LOS E PM peak hour; and
- I-215 Freeway Northbound – South of Scott Road (#4) – LOS E PM peak hour only.

Table 4.15-23
Basic Freeway Segment Analysis for EAP Conditions

Freeway	Direction	Mainline Segment	Lanes[1]	Existing (2018)				EAP (Phase 1 2021)				EAP (Phase 2 Project Buildout 2025)			
				Density[2]		LOS[3]		Density[2]		LOS[3]		Density[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	Southbound	North of Scott Road	3	**41.8**	31.9	**E**	D	--[4]	**35.8**	**F**	**E**	--[4]	**42.1**	**F**	**E**
		South of Scott Road	3	**44.6**	31.9	**E**	D	--[4]	**35.5**	**F**	**E**	--[4]	**41.5**	**F**	**E**
	Northbound	North of Scott Road	3	18.3	29.6	C	D	19.7	32.7	C	D	21.7	**37.8**	C	**E**
		South of Scott Road	3	17.4	31.7	B	D	18.6	**35.4**	C	**E**	20.3	**41.5**	C	**E**

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] LOS = Level of Service.
[4] HCS7 does not report density for freeway facilities operating at LOS F.

- *EAP (Phase 2 Project Buildout 2025)*

EAP (Phase 2 Project Buildout 2025) peak hour mainline directional volumes are provided on **Figure 4.15-38**. As shown on **Table 4.15-23**, the following additional freeway mainline segment is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 2 Project Buildout 2025) traffic conditions, in addition to those listed under Existing (2018) and EAP (Phase 1 2021) conditions:

- I-215 Freeway Northbound – North of Scott Road (#3) – LOS E PM peak hour only.

EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) conditions basic freeway segment analysis worksheets are provided in Appendix 6.7 and Appendix 6.8, of the *TIA*, respectively.

Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for EAP conditions and the results of this analysis are presented in **Table 4.15-24, *Freeway Ramp Merge/Diverge Analysis for EAP Conditions***, below.

Table 4.15-24
Freeway Ramp Merge/Diverge Analysis for EAP Conditions

Freeway	Direction	Ramp Junction	Lanes on Freeway	Existing (2018)				EAP (Phase 1 2021)				EAP (Phase 2 Project Buildout 2025)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
I-215 Freeway	Southbound	Off-Ramp at Scott Road	3	**36.3**	**E**	31.2	D	--[3]	**F**	**33.5**	**E**	--[3]	**F**	**36.8**	**E**
		On-Ramp at Scott Road	3	**43.4**	**E**	33.3	D	--[3]	**F**	36.2	D	--[3]	**F**	**40.9**	**E**
	Northbound	On-Ramp at Scott Road	3	20.5	C	31.7	D	22.1	C	34.4	D	24.3	C	**38.4**	**E**
		Off-Ramp at Scott Road	3	18.9	C	32.0	D	20.2	C	**34.3**	**E**	21.9	C	--[3]	**F**

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] LOS = Level of Service.
[4] HCS7 does not report density for freeway facilities operating at LOS F.

- *EAP (Phase 1 2021)*

As shown in **Table 4.15-24**, the following additional ramp merge/diverge is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 1 2021) traffic conditions:

- I-215 Freeway – Southbound, Off-Ramp at Scott Road (#1) – LOS F AM peak hour, LOS E PM peak hour;
- I-215 Freeway – Southbound, On-Ramp at Scott Road (#4) – LOS F AM peak hour only; and
- I-215 Freeway – Northbound, Off-Ramp at Scott Road (#6) – LOS E PM peak hour only.

- *EAP (Phase 2 Project Buildout 2025)*

The following additional ramp merge/diverge is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 2 Project Buildout 2025) traffic conditions, in addition to those listed under Existing (2018) and EAP (Phase 1 2021) conditions:

- I-215 Freeway – Northbound, On-Ramp at Scott Road (#5) – LOS E PM peak hour only.

EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) conditions freeway ramp merge/diverge operations analysis worksheets are provided in Appendix 6.9 and Appendix 6.10 of the *TIA*, respectively.

Deficiencies and Recommended Improvements

Improvement strategies have been recommended at intersections that have been identified as deficient 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 discussed below to address EAP traffic deficiencies is presented in **Table 4.15-25, *Intersection Analysis for EAP Conditions with Improvements***. The improvements that were previously required to address LOS deficiencies for Existing and E+P traffic conditions are shown in *italics*. New improvements for EAP traffic conditions are shown in regular text.

Table 4.15-25
Intersection Analysis for EAP Conditions with Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		LOS	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Haun Rd./Zeiders Rd. / Scott Rd.																	
	- 2021 With Improvements		No Improvements Necessary															
	- 2025 With Improvements	TS	1	1	1	**2**	1	0	1	1	0	1	1	**1>**	44.6	54.3	D	D
3	I-215 SB Ramps / Scott Rd.																	
	- 2021 With Improvements	TS	0	0	0	0	1	1	0	1	1	1	1	0	LOS E/F[4]			
	- 2025 With Improvements		I-215/Scott Road Interchange Improvements												Acceptable LOS[5]			
5	I-215 NB Ramps / Scott Rd.																	
	- 2021 With Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	1	LOS E/F[4]			
	- 2025 With Improvements		I-215/Scott Road Interchange Improvements												Acceptable LOS[5]			
8	Briggs Rd. / Scott Rd.																	
	- 2021 With Improvements	TS	**1**	1	**0**	0	1	1	1	2	0	1	2	1	30.9	30.6	C	C
	- 2025 With Improvements	TS	**1**	1	**0**	0	1	1	1	2	0	1	2	1	31.1	33.8	C	C
13	Leon Rd. / Scott Rd.																	
	- 2021 With Improvements	**TS**	0	1	0	0	1	0	0	1	0	0	1	0	11.2	11.5	B	B
	- 2025 With Improvements	**TS**	0	1	0	0	1	0	0	1	0	0	1	0	17.2	22.1	B	C

BOLD = LOS does not meet the County, City of Menifee, City of Murrieta, or Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
NOTE: All recommended improvements described above are consistent with the General Plan designations of the respective jurisdictions in which they are located.

[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 Highway Capacity Manual 6, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control.

[3] AWS = All-Way Stop; TS = Traffic Signal; TS = Improvement.

[4] Based on the constrained traffic count data, the intersection appears to operate at acceptable LOS or at LOS better than field observations would suggest. However, field observations show that the intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations.

[5] As demonstrated on the subsequent Table 4.15-31, the study area intersections are anticipated to operate at acceptable LOS with the planned I-215 Freeway at Scott Road (Phase 1) interchange improvements in place.

- *Intersections*

Phase 1 2021

Improvement – Briggs Road & Scott Road (#8) – This intersection is currently operating at an unacceptable LOS and the addition of Project traffic is anticipated to contribute to the existing deficiency. As such, the impact is cumulatively considerable. The Project shall contribute fair

share funding towards widening and constructing a dedicated northbound left turn lane and a shared through-right turn lane (consistent with Existing conditions). The Project will be required to implement **Standard Condition SC-TR-1**, **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

Improvement – Leon Road & Scott Road (#13) – This intersection currently operates at an acceptable LOS under Existing traffic conditions and is anticipated to operate at a deficient LOS with the addition of Project traffic. As such, the impact is considered significant. The Project shall install a traffic signal. The Project will be required to implement **Standard Condition SC-TR-1**, **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

Phase 2 Project Buildout 2025

Improvement – Haun Road/Zeiders Road & Scott Road (#1) – This intersection currently operates at an acceptable LOS under Existing traffic conditions and is anticipated to operate at a deficient LOS with the addition of Project traffic. As such, the impact is considered significant. The Project shall:

- Construct a 2nd southbound left turn lane; and
- Project to modify the traffic signal to implement overlap phasing on the westbound right turn lane.

It should be noted that these improvements have been conditioned on other near-by development and are to be constructed by others.

In addition, with implementation of **Standard Condition SC-TR-1**, **Standard Condition SC-PS-1**, **Mitigation Measure MM-TR-2**, **Mitigation Measure MM-TR-4**, and **Mitigation Measure MM-TR-5**, impacts will be reduced to a less than significant level.

Improvement – Briggs Road & Scott Road (#8) – This intersection is currently operating at an unacceptable LOS and the addition of Project traffic is anticipated to contribute to the existing deficiency. As such, the impact is cumulatively considerable. The Project shall contribute fair share funding towards widening and constructing a dedicated northbound left turn lane and a shared through-right turn lane (consistent with Existing conditions). The Project will be required to implement **Standard Condition SC-TR-1**, **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

Improvement – Leon Road & Scott Road (#13) – This intersection currently operates at an acceptable LOS under Existing traffic conditions and is anticipated to operate at a deficient LOS with the addition of Project traffic. As such, the impact is considered significant. The Project

shall install a traffic signal. The Project will be required to implement **Standard Condition SC-TR-1**, **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

Worksheets for EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) conditions, with improvements, HCM calculations are provided in Appendix 6.11 and Appendix 6.12 of the *TIA*.

- *Freeway Facilities*

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the EAP (Phase 1 2021) and EAP (Phase 2 Project Buildout 2025) deficiencies on the SHS.

Existing Plus Ambient Growth Plus Project Plus Cumulative (EAPC) Traffic Conditions

This section discusses the methods used to develop Existing Plus Ambient Growth Plus Project Plus Cumulative (EAPC) traffic forecasts, and the resulting intersection operations, freeway mainline operations, and traffic signal warrant analyses.

Roadway Improvements

The lane configurations and traffic controls assumed to be in place for EAPC conditions are consistent with the following improvements discussed below. The improvements listed below have been confirmed with County of Riverside staff, City of Menifee staff, or the Project Applicant.

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). These include the Project site adjacent roadways of Leon Road, Holland Road, and Eucalyptus Road.
- In order to access the existing roadway network from the site, the Project Applicant will also construct a 32-foot paved roadway along Holland Road between Briggs Road and Leon Road.
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).
- The Phase 1 (interim) I-215 Freeway at Scott Road planned interchange improvements are anticipated to be in place by EAPC (Phase 1 2021) traffic conditions.

EAPC (Phase 1 2021) Traffic Volume Forecasts

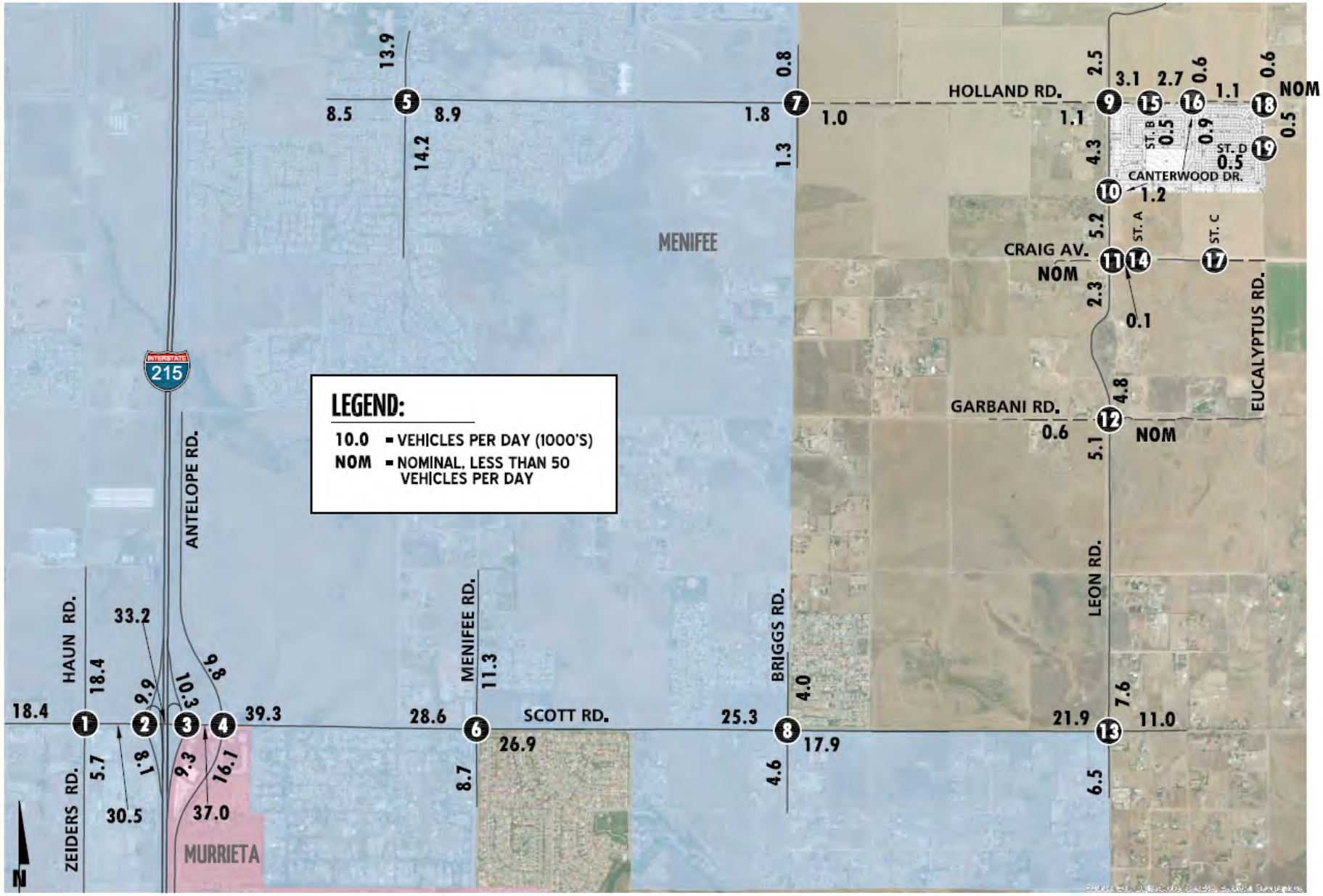
This scenario includes Existing traffic volumes plus an ambient growth factor of 6.12% plus traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project Phase 1 traffic. The weekday ADT and weekday AM and PM peak hour

volumes which can be expected for EAPC (Phase 1 2021) traffic conditions are shown on **Figure 4.15-39, *EAPC (Phase 1 2021) Average Daily Traffic (ADT)***, and **Figure 4.15-40, *EAPC (Phase 1 2021) Traffic Volumes***.

EAPC (Phase 2 Project Buildout 2025) Traffic Volume Forecasts

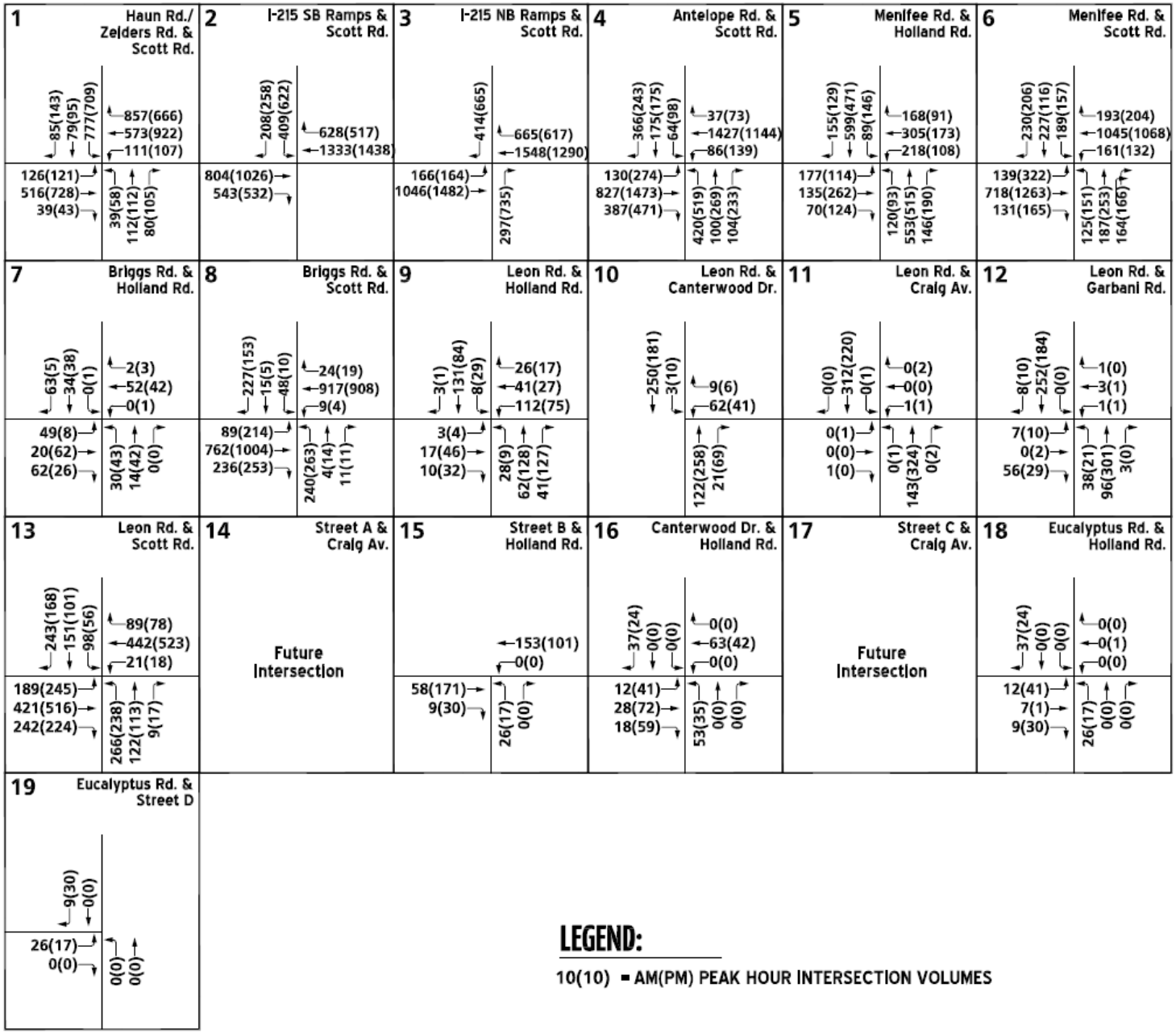
This scenario includes Existing traffic volumes, an ambient growth factor of 14.87%, traffic from pending and approved but not yet constructed known development projects in the area and the addition of Phase 2 Project Buildout traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAPC (Phase 2 Project Buildout 2025) traffic conditions are shown on **Figure 4.15-41, *EAPC (Phase 2 Project Buildout 2025) Average Daily Traffic (ADT)***, and **Figure 4.15-42, *EAPC (Phase 2 Project Buildout 2025) Traffic Volumes***.

FIGURE 4.15-39
EAPC (PHASE 1 2021) AVERAGE DAILY TRAFFIC (ADT)



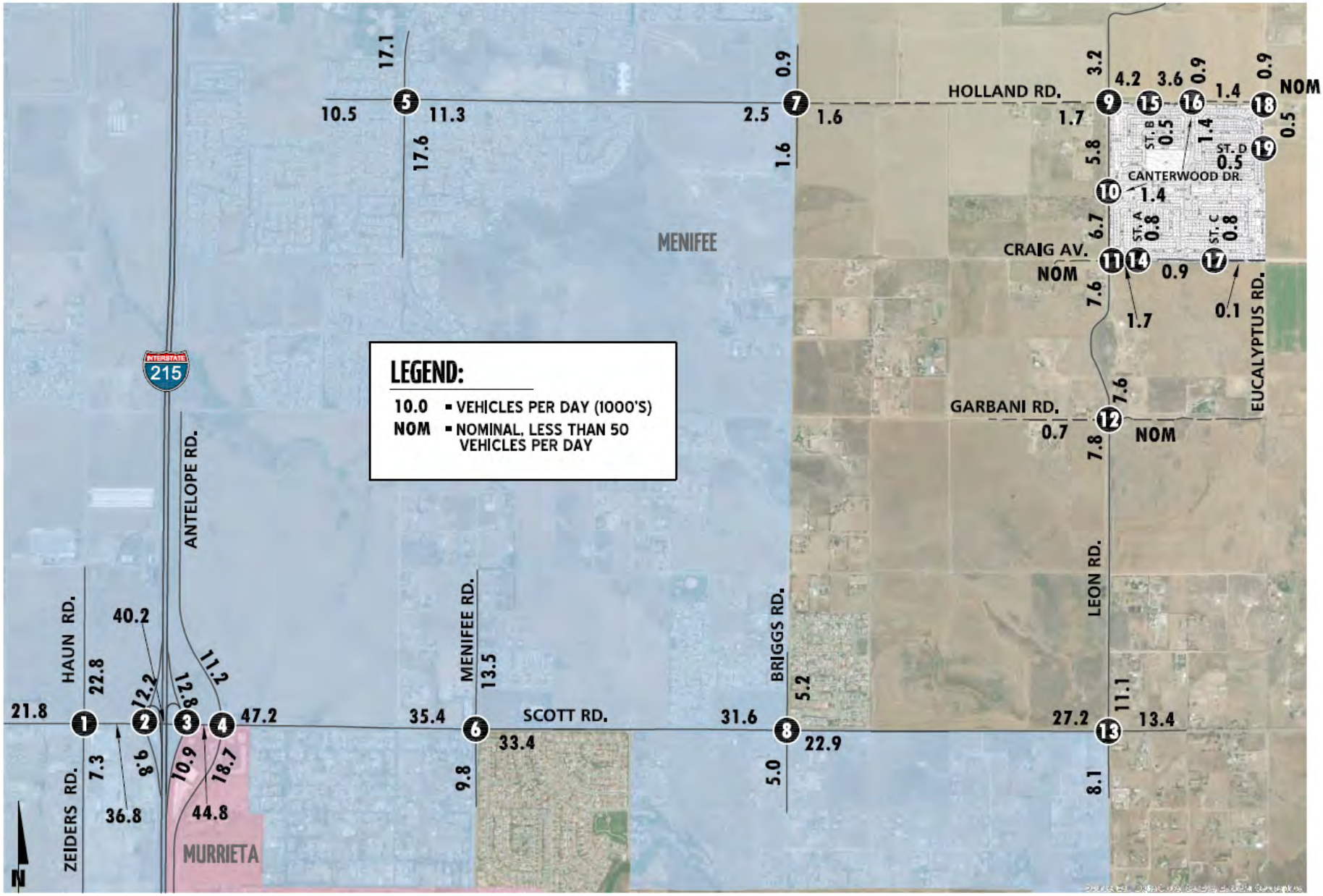
Source: TIA (**Appendix K**)

FIGURE 4.15-40
EAPC (PHASE 1 2021) TRAFFIC VOLUMES



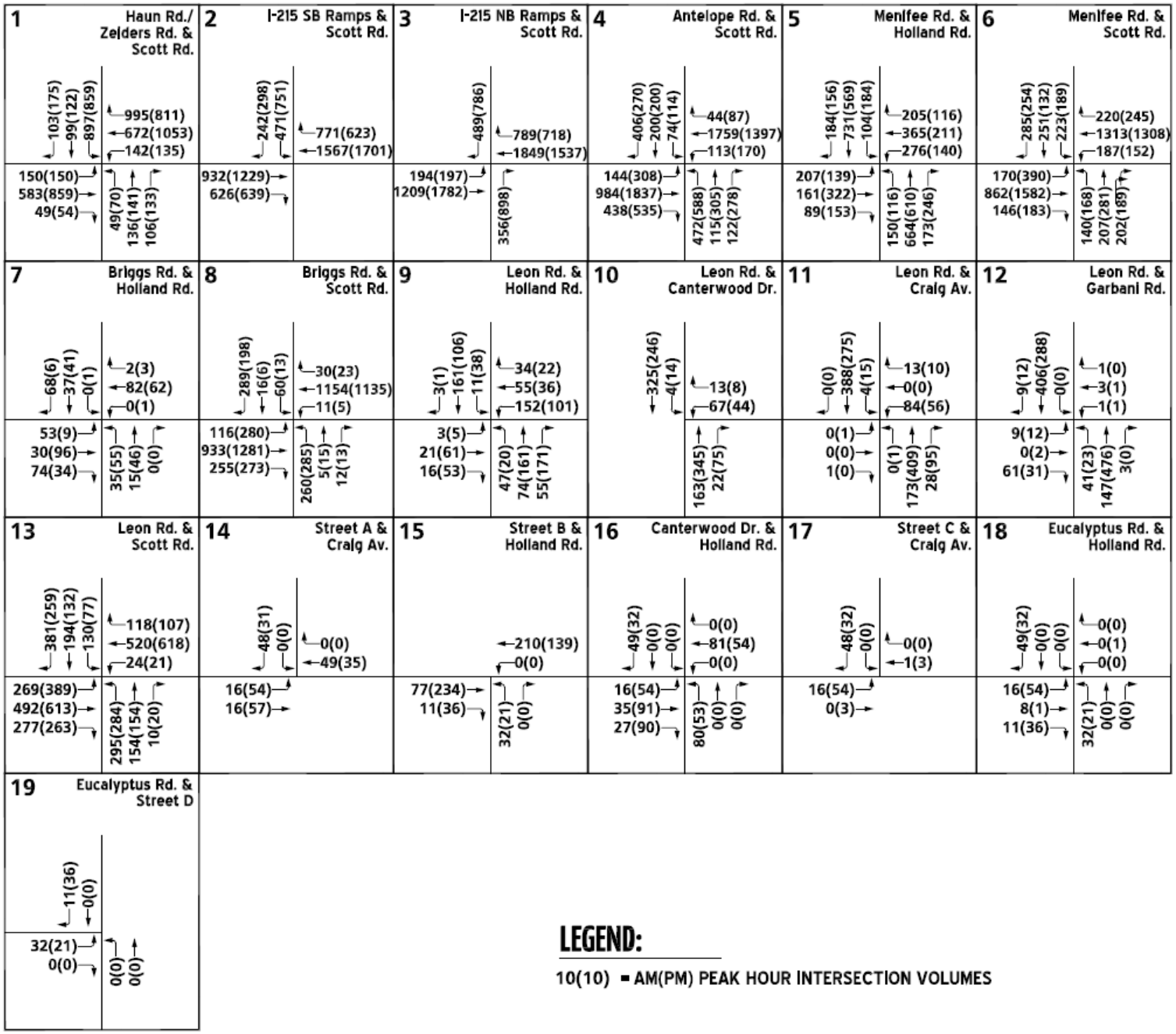
Source: TIA (**Appendix K**)

FIGURE 4.15-41
EAPC (PHASE 2 PROJECT BUILDOUT 2025) AVERAGE DAILY TRAFFIC (ADT)



Source: TIA (**Appendix K**)

FIGURE 4.15-42
EAPC (PHASE 2 PROJECT BUILDOUT 2025) TRAFFIC VOLUMES



Source: TIA (**Appendix K**)

Intersection Operations Analysis

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC traffic conditions with roadway and intersection geometrics consistent with the roadway improvements discussed above.

- *EAPC (Phase 1 2021)*

The intersection analysis results are summarized in **Table 4.15-26, *Intersection Analysis for EAPC Conditions***, which indicates that the following study area intersections are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during one or more peak hours under EAPC (Phase 1 2021) traffic conditions:

- Haun Rd./Zeiders Rd. & Scott Rd. (#1) – LOS F AM and PM peak hours;
- Antelope Rd. & Scott Rd. (#4) – LOS E AM peak hour, LOS F PM peak hour;
- Menifee Rd. & Holland Rd. (#5) – LOS F AM and PM peak hours;
- Menifee Rd. & Scott Rd. (#6) – LOS E AM peak hour, LOS F PM peak hour;
- Briggs Rd. & Scott Rd. (#8) – LOS F AM and PM peak hours; and
- Leon Rd. & Scott Rd. (#13) – LOS F AM and PM peak hours.

Table 4.15-26
Intersection Analysis for EAPC Conditions

#	Intersection	Traffic Control[2]	EAPC (Phase 1 2021) Delay[1] (secs.) AM	EAPC (Phase 1 2021) Delay[1] (secs.) PM	EAPC (Phase 1 2021) Level of Service AM	EAPC (Phase 1 2021) Level of Service PM	EAPC (Phase 2 Project Buildout 2025) Delay[1] (secs.) AM	EAPC (Phase 2 Project Buildout 2025) Delay[1] (secs.) PM	EAPC (Phase 2 Project Buildout 2025) Level of Service AM	EAPC (Phase 2 Project Buildout 2025) Level of Service PM
1	Haun Rd./Zeiders Rd. / Scott Rd.	TS	**132.8**	**181.5**	**F**	**F**	**>200.0**	**>200.0**	**F**	**F**
2	I-215 SB Ramps / Scott Rd.	TS	LOS E/F[3]				LOS E/F[3]			
3	I-215 NB Ramps / Scott Rd.	TS	LOS E/F[3]				LOS E/F[3]			
4	Antelope Rd. / Scott Rd.	TS	**77.6**	**106.2**	**E**	**F**	**130.0**	**178.8**	**F**	**F**
5	Menifee Rd. / Holland Rd.	AWS	**>100.0**	**84.7**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
6	Menifee Rd. / Scott Rd.	TS	**60.4**	**83.3**	**E**	**F**	**103.4**	**154.8**	**F**	**F**
7	Briggs Rd. / Holland Rd.	CSS	12.5	11.0	B	B	14.6	12.3	B	B
8	Briggs Rd. / Scott Rd.	TS	**192.1**	**>200.0**	**F**	**F**	**195.2**	**>200.0**	**F**	**F**
9	Leon Rd. / Holland Rd.	AWS	9.5	12.5	A	B	11.4	26.7	B	D
10	Leon Rd. / Canterwood Dr.	**CSS**	11.8	12.8	B	B	13.3	15.2	B	C
11	Leon Rd. / Craig Av.	CSS	18.2	17.1	C	C	**83.5**	**39.8**	**F**	**E**
12	Leon Rd. / Garbani Rd.	CSS	12.6	16.2	B	C	15.8	25.3	C	D
13	Leon Rd. / Scott Rd.	AWS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**
14	St. A / Craig Av.	**CSS**	Future Intersection				8.7	8.6	A	A
15	St. B / Holland Rd.	**CSS**	10.0	10.4	B	B	10.6	11.4	B	B
16	Canterwood Dr. / Holland Rd.	**CSS**	10.0	10.8	B	B	10.8	12.0	B	B
17	St. C / Craig Av.	**CSS**	Future Intersection				8.5	8.4	A	A
18	Eucalyptus Rd. / Holland Rd.	**CSS**	9.1	9.5	A	A	9.4	9.9	A	A
19	Eucalyptus Rd. / St. D	**CSS**	8.6	8.7	A	A	8.7	8.7	A	A

BOLD = LOS does not meet the County, City of Menifee, City of Murrieta, or Caltrans requirements (i.e., unacceptable LOS or LOS E/F).

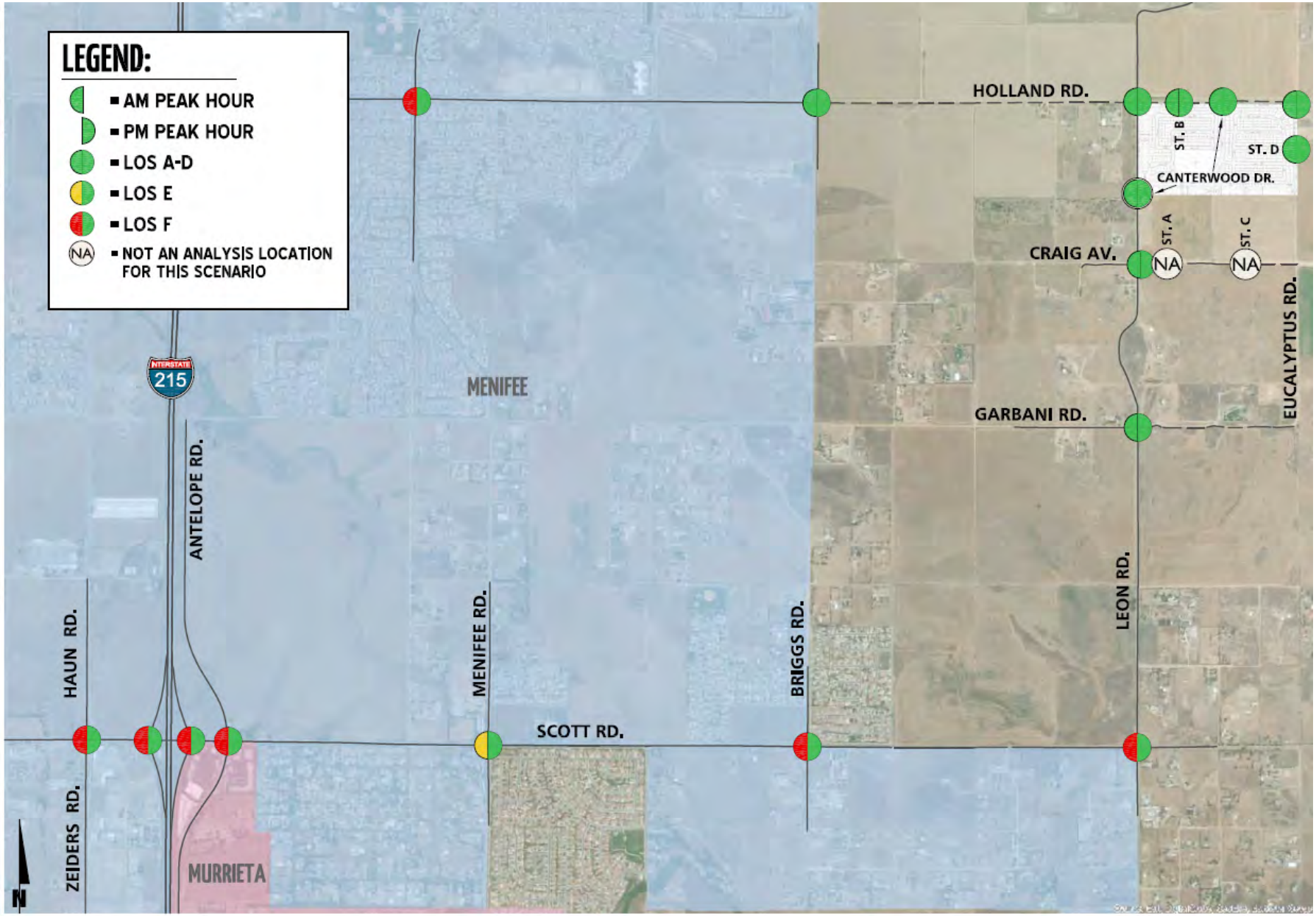
[1] Per the Highway Capacity Manual 6, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[2] CSS = Cross-street Stop; AWS = All-way Stop; TS = Traffic Signal; CSS = Improvement

[3] Based on the constrained traffic count data, the intersection appears to operate at acceptable LOS or at LOS better than field observations would suggest. However, field observations show that the intersections along Scott Road near the I-215 Freeway experience peak hour queues that periodically affect intersection operations.

Figure 4.15-43, *EAPC (Phase 1 2021) Summary of LOS* summarizes the weekday AM and PM peak hour study area intersection LOS under EAPC (Phase 1 2021) traffic conditions, consistent with the summary provided in **Table 4.15-26**. The intersection operations analysis worksheets for EAPC (Phase 1 2021) conditions are included in Appendix 7.1 of the *TIA*.

FIGURE 4.15-43
EAPC (PHASE 1 2021) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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- *EAPC (Phase 2 Project Buildout 2025)*

As shown on **Table 4.15-26**, and illustrated on **Figure 4.15-44, *EAPC (Phase 2 Project Buildout 2025) Summary of LOS***, the following intersection is anticipated to operate at unacceptable LOS under EAPC (Phase 2 Project Buildout 2025) traffic conditions, in addition to those previously identified under Existing (2018), EAP (Phase 1 2021), EAP (Phase 2 Project Buildout 2025) and EAPC (Phase 1 2021) traffic conditions:

- Leon Av. & Craig Av. (#11) – LOS F AM peak hour, LOS E PM peak hour

The intersection operations analysis worksheets for EAPC (Phase 2 Project Buildout 2025) traffic conditions are included in Appendix 7.2 of the *TIA*.

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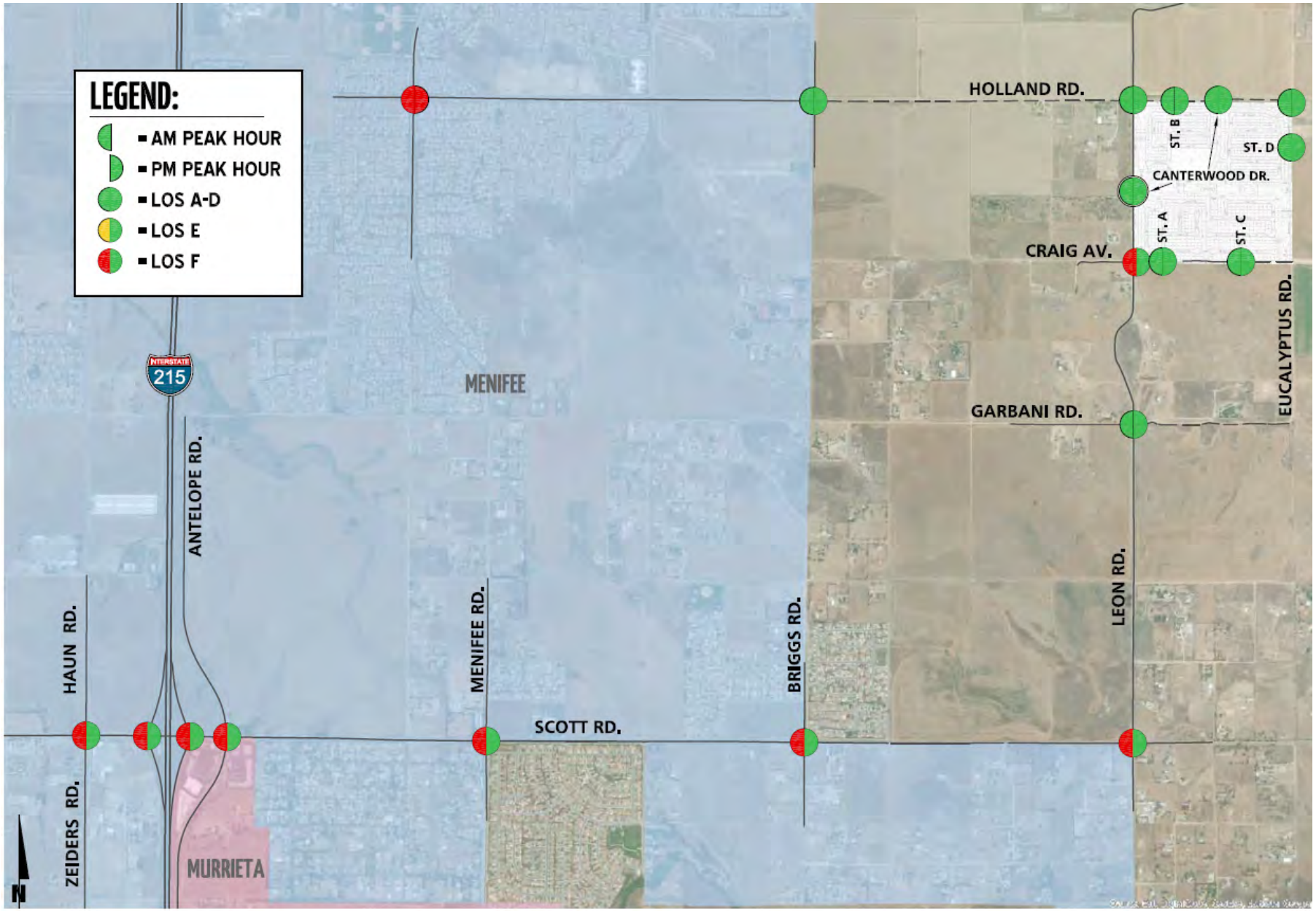
FIGURE 4.15-44
EAPC (PHASE 2 PROJECT BUILDOUT 2025) SUMMARY OF LOS



Source: TIA (**Appendix K**)

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Off-Ramp Queuing Analysis

A queuing analysis was performed for the northbound and southbound off-ramps at the I-215 Freeway at Scott 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 4.15-27, *Peak Hour Freeway Off-Ramp Queuing Analysis for EAPC Conditions***, below, for EAPC traffic conditions. Off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline.

Table 4.15-27
Peak Hour Freeway Off-Ramp Queuing Analysis for EAPC Conditions

Intersection	Movement	Available Stacking (Feet)	EAPC (Phase 1 2021)				EAPC (Phase 2 Project Buildout 2025)			
			95th Percentile Stacking Distance Required (Feet)		Acceptable? [1]		95th Percentile Stacking Distance Required (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Off-Ramp / Scott Road										
	SBL/T	1,300	528 [2]	816 [2]	Yes	Yes	633 [2]	1,019 [2]	Yes	Yes
	SBR	460	161	197	Yes	Yes	197	239	Yes	Yes
I-215 NB Off-Ramp / Scott Road										
	NBL/T	1,560	302 [2]	438 [2]	Yes	Yes	337 [2]	491 [2]	Yes	Yes
	NBR	400	203 [2]	945 [2]	Yes	Yes[3]	367 [2]	1,205 [2]	Yes	Yes[3]

[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] The 95th percentile queues indicate potential queuing for the movements and peak hours identified above. However, while the potential queues would exceed the turn pocket lengths and could spillback into the adjacent through lanes, none are anticipated to result in spillback onto the I-215 Freeway mainline since the adjacent through lanes all have sufficient capacity.

As shown on **Table 4.15-27**, and consistent with Existing traffic conditions, there are no potential queuing issues anticipated during the weekday AM or PM peak 95th percentile traffic flows for EAPC traffic conditions. Worksheets for EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) traffic conditions off-ramp queuing analysis are provided in Appendix 7.3 and Appendix 7.4 of the *TIA*, respectively.

Traffic Signal Warrants Analysis

Traffic signal warrants have been performed on unsignalized intersections that have not warranted a signal under Existing traffic conditions. As shown in **Table 4.15-28, *EAPC Traffic Signal Warrants***, there are no unsignalized study area intersections anticipated to warrant a traffic signal in addition to those previously warranted under Existing traffic conditions (see Appendix 7.5 and Appendix 7.6 of the *TIA*).

Table 4.15-28
EAPC Traffic Signal Warrants

#	Intersection	Existing 2018	EAPC Phase 1 2021	EAPC Phase 2 Project Buildout 2025
5	Menifee Rd. / Holland Rd.	PH		
7	Briggs Rd. / Holland Rd.			
9	Leon Rd. / Holland Rd.			
10	Leon Rd. / Canterwood Dr.	DNE		
11	Leon Rd. / Craig Av.			
12	Leon Rd. / Garbani Rd.			
13	Leon Rd. / Scott Rd.	PH		
14	St. A / Craig Av.	DNE	DNE	
15	St. B / Holland Rd.	DNE		
16	Canterwood Dr. / Holland Rd.	DNE		
17	St. C / Craig Av.	DNE	DNE	
18	Eucalyptus Rd. / Holland Rd.	DNE		
19	Eucalyptus Rd. / St. D	DNE		

PH = Peak Hour Warrant Met; X = Daily Volume Warrant Met; DNE = Does Not Exist.

Basic Freeway Segment Analysis

- *EAPC (Phase 1 2021)*

EAPC (Phase 1 2021) peak hour mainline directional volumes are provided on **Figure 4.15-45, *EAPC (2021) Freeway Mainline Volumes***. As shown on **Table 4.15-29, *Basic Freeway Segment Analysis for EAPC Conditions***, the following additional freeway mainline segment is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAPC (Phase 1 2021) traffic conditions:

- I-215 Freeway Southbound – North of Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour;
- I-215 Freeway Southbound – South of Scott Road (#2) – LOS F AM peak hour; LOS E PM peak hour;
- I-215 Freeway Northbound – North of Scott Road (#3) – LOS E PM peak hour only; and
- I-215 Freeway Northbound – South of Scott Road (#4) – LOS E PM peak hour only.

Table 4.15-29
Basic Freeway Segment Analysis for EAPC Conditions

Freeway	Direction	Mainline Segment	Lanes[1]	EAPC (Phase 1 2021)				EAPC (Phase 2 Project Buildout 2025)			
				Density[2]		LOS[3]		Density[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM	AM	PM
I-215 Freeway	Southbound	North of Scott Road	3	..[4]	**39.0**	**F**	**E**	..[4]	..[4]	**F**	**F**
		South of Scott Road	3	..[4]	**40.5**	**F**	**E**	..[4]	..[4]	**F**	**F**
	Northbound	North of Scott Road	3	21.0	**36.2**	C	**E**	23.6	**43.6**	C	**E**
		South of Scott Road	3	20.2	**44.1**	C	**E**	22.6	..[4]	C	**F**

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] LOS = Level of Service.
[4] HCS7 does not report density for freeway facilities operating at LOS F.

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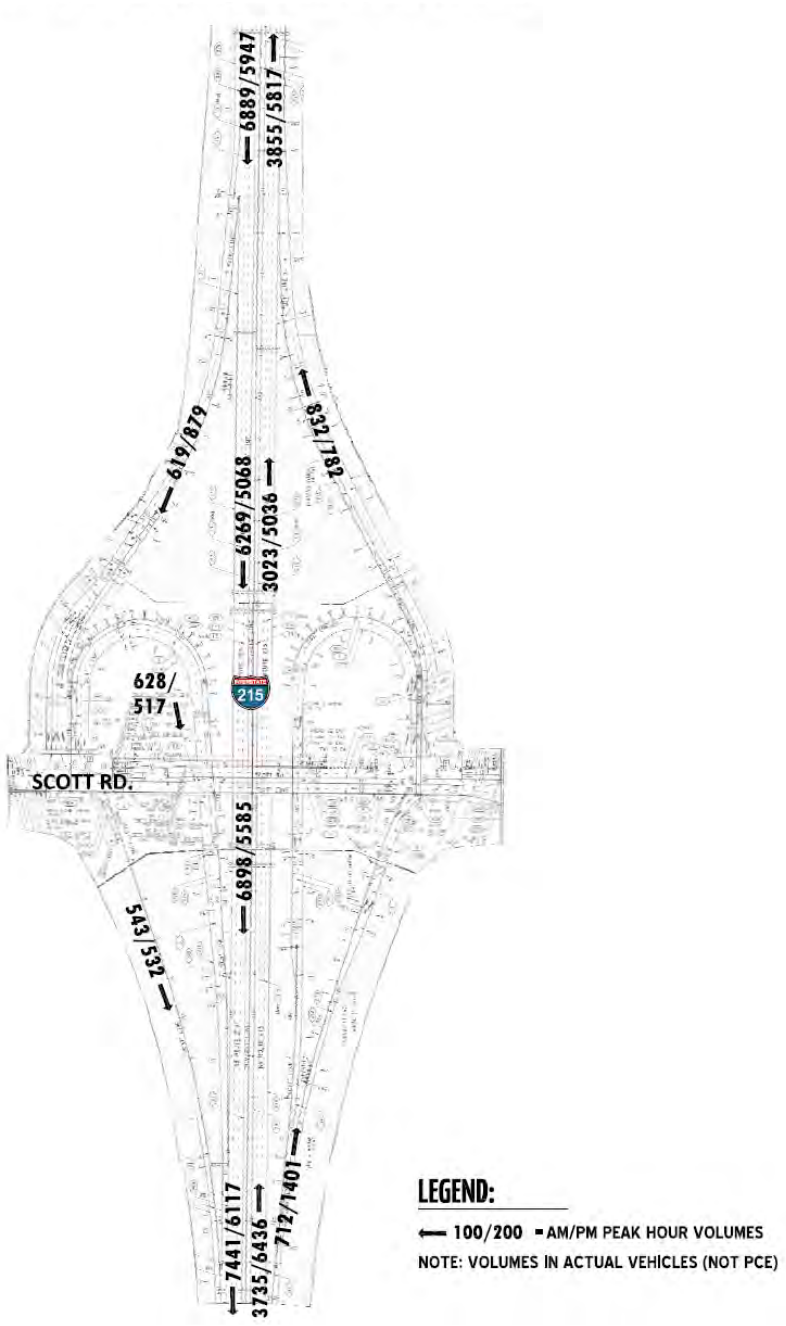
FIGURE 4.15-45
EAPC (2021) FREEWAY MAINLINE VOLUMES



Source: TIA (**Appendix K**)

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- *EAPC (Phase 2 Project Buildout 2025)*

EAPC (Phase 2 Project Buildout 2025) peak hour mainline directional volumes are provided on **Figure 4.15-46, *EAPC (2025) Freeway Mainline Volumes***. There are no freeway mainline segments anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAPC (Phase 2 Project Buildout 2025) traffic conditions, in addition to those previously identified under Existing (2018), EAP (Phase 1 2021), EAP (Phase 2 Project Buildout 2025), and EAPC (Phase 1 2021) traffic conditions.

EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) conditions basic freeway segment analysis worksheets are provided in Appendix 7.7 and Appendix 7.8 of the *TIA*, respectively.

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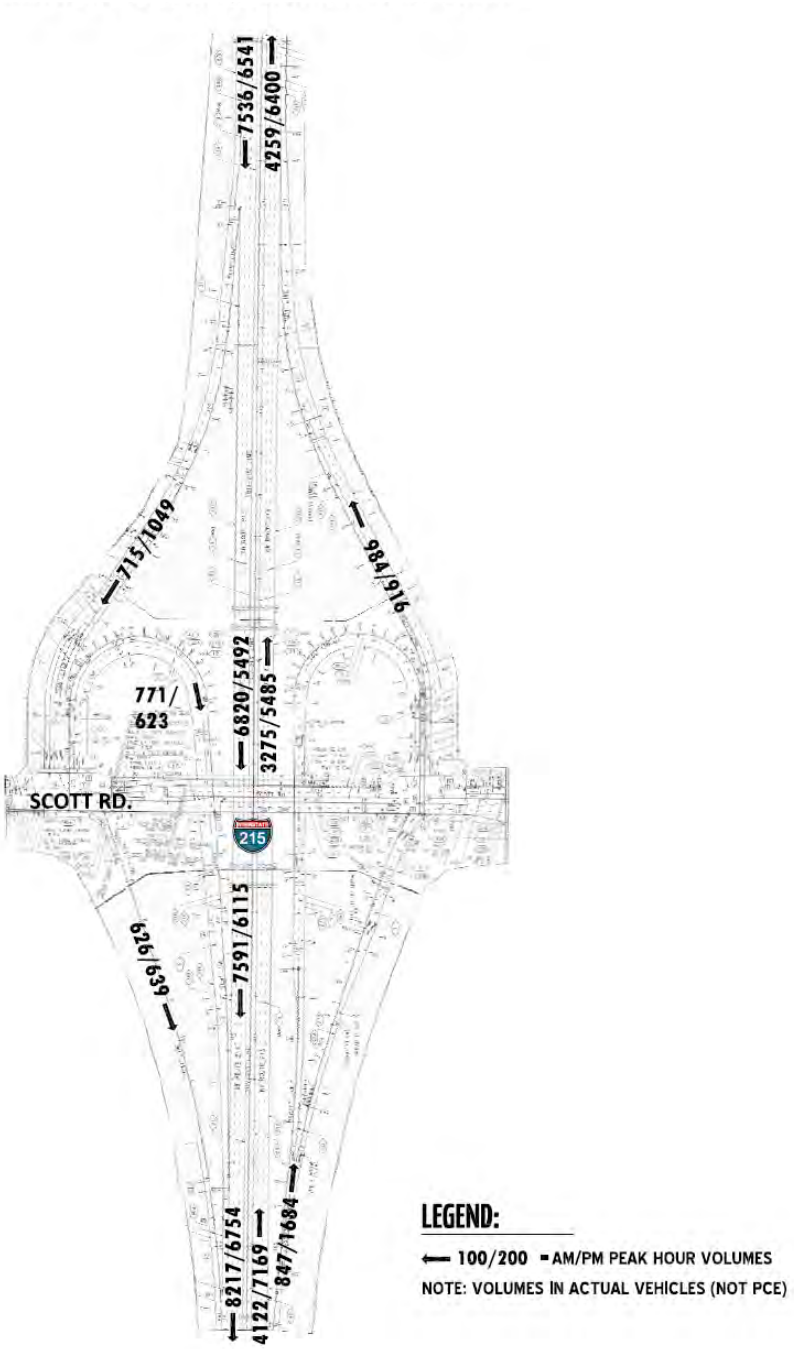
FIGURE 4.15-46
EAPC (2025) FREEWAY MAINLINE VOLUMES



Source: TIA (**Appendix K**)

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Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for EAPC conditions and the results of this analysis are presented in **Table 4.15-30, *Freeway Ramp Merge/Diverge Analysis for EAPC Conditions***, below.

Table 4.15-30
Freeway Ramp Merge/Diverge Analysis for EAPC Conditions

Freeway	Direction	Ramp Junction	Lanes on Freeway	EAPC (Phase 1 2021)				EAPC (Phase 2 Project Buildout 2025)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
I-215 Freeway	Southbound	Off-Ramp at Scott Road	3	--[3]	**F**	**35.4**	**E**	--[3]	**F**	--[3]	**F**
		Loop On-Ramp (Upstream) at Scott Road	3	--[3]	**F**	**36.0**	**E**	--[3]	**F**	**40.9**	**E**
		Loop On-Ramp (Downstream) at Scott Road	3	--[3]	**F**	**36.0**	**E**	--[3]	**F**	**40.9**	**E**
		On-Ramp at Scott Road	3	--[3]	**F**	**40.4**	**E**	--[3]	**F**	--[3]	**F**
	Northbound	On-Ramp at Scott Road	3	23.3	C	37.3	D	26.0	C	**43.4**	**E**
		Off-Ramp at Scott Road	3	22.0	C	--[3]	**F**	24.4	D	--[3]	**F**

BOLD = LOS does not meet Caltrans requirements (i.e., unacceptable LOS or LOS E/F).
[1] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[2] LOS = Level of Service.
[3] HCS7 does not report density for freeway facilities operating at LOS F.

- *EAPC (Phase 1 2021)*

As shown in **Table 4.15-30**, the following additional ramp merge/diverge areas are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAPC (Phase 1 2021) traffic conditions:

- I-215 Freeway – Southbound, Off-Ramp at Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour;
- I-215 Freeway – Southbound, Loop On-Ramp (Upstream) at Scott Road (#2) – LOS F AM peak hour, LOS E PM peak hour;
- I-215 Freeway – Southbound, Loop On-Ramp (Downstream) at Scott Road (#3) – LOS F AM peak hour, LOS E PM peak hour;
- I-215 Freeway – Southbound, On-Ramp at Scott Road (#4) – LOS F AM peak hour; LOS E PM Peak hour; and
- I-215 Freeway – Northbound, Off-Ramp at Scott Road (#6) – LOS F PM peak hour only.

- *EAPC (Phase 2 Project Buildout 2025)*

There are no ramp merge/diverge areas are anticipated to operate at an unacceptable LOS

(i.e., LOS E or worse) during one or more peak hours under EAPC (Phase 2 Project Buildout 2025) traffic conditions, in addition to those previously identified under Existing (2018), EAP (Phase 1 2021), EAP (Phase 2 Project Buildout 2025) and EAPC (Phase 1 2021) traffic conditions.

EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) conditions freeway ramp merge/diverge operations analysis worksheets are provided in Appendix 7.9 and Appendix 7.10 of the *TIA*, respectively.

Deficiencies and Improvements

- *Intersections*

Improvement strategies for intersections that have been identified as deficient 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 necessary to address EAPC traffic deficiencies is presented in **Table 4.15-31, *Intersection Analysis for EAPC Conditions with Improvements***. Worksheets for EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) conditions, with improvements, HCM calculations are provided in Appendix 7.11 and Appendix 7.12 of the *TIA*, respectively.

Table 4.15-31
Intersection Analysis for EAPC Conditions with Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		LOS	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Haun Rd./Zeiders Rd. / Scott Rd.																	
	- 2021 With Improvements[4]	TS	1	1	1	**2**	1	0	1	**2**	0	1	**2**	**1>**	50.3	40.7	D	D
	- 2025 With Improvements[4]	TS	1	1	1	**2**	1	0	1	**2**	0	1	**2**	**1>**	47.9	54.5	D	D
2	I-215 SB Ramps / Scott Rd.																	
	- 2021 With Improvements[5]	TS	0	0	0	**2**	**0**	**2**	0	**2**	**1>>**	**0**	**2**	**1**	21.6	11.0	C	B
	- 2025 With Improvements[5]		0	0	0	**2**	**0**	**2**	0	**2**	**1>>**	**0**	**2**	**1**	29.7	11.9	C	B
3	I-215 NB Ramps / Scott Rd.																	
	- 2021 With Improvements[5,6]	TS	**0**	1	**2**	0	0	**2**	1	**2**	0	**0**	**2**	**1**	18.0	22.3	B	C
	- 2025 With Improvements[5,6]		**0**	1	**2**	0	0	**2**	1	**2**	0	**0**	**2**	**1**	20.6	26.2	C	C
4	Antelope Rd. / Scott Rd.																	
	- 2021 With Improvements	TS	2	1	1	1	1	1	1	2	**1>**	1	**3**	0	40.3	52.3	D	D
	- 2025 With Improvements	TS	2	1	1	1	1	1	**2**	**3**	**1>**	1	**3**	0	48.2	49.0	D	D
5	Menifee Rd. / Holland Rd.																	
	- 2021 With Improvements	**TS**	1	2	0	1	2	0	1	2	0	1	2	0	22.0	23.8	C	C
	- 2025 With Improvements	**TS**	1	2	0	1	2	0	1	2	0	**2**	2	**1**	54.7	26.2	D	C
6	Menifee Rd. / Scott Rd.																	
	- 2021 With Improvements	TS	1	1	1	1	1	**1**	**2**	2	0	1	**3**	**1**	29.9	53.7	C	D
	- 2025 With Improvements	TS	1	1	1	1	1	**1**	**2**	**3**	0	1	**3**	**1**	36.0	45.7	D	D
8	Briggs Rd. / Scott Rd.																	
	- 2021 With Improvements	TS	**1**	1	**0**	0	1	1	1	2	0	1	2	1	31.1	31.4	C	C
	- 2025 With Improvements	TS	**1**	1	**0**	0	1	1	1	2	0	1	2	1	44.6	37.7	D	D
11	Leon Rd. / Craig Av.																	
	- 2021 With Improvements		No Improvements Necessary															
	- 2025 With Improvements	CSS	**1**	**2**	0	**1**	**2**	0	0	1	0	0	1	0	28.1	29.0	D	D
13	Leon Rd. / Scott Rd.																	
	- 2021 With Improvements	**TS**	**1**	1	0	**1**	1	0	**1**	1	0	**1**	1	0	18.9	34.1	B	C
	- 2025 With Improvements	**TS**	**1**	1	0	**1**	1	**1>**	**1**	**2**	0	**1**	**2**	0	40.6	39.6	D	D

NOTE: All recommended improvements described above are consistent with the General Plan designations of the respective jurisdictions in which they are located.

[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 Highway Capacity Manual 6, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement.

[4] Implement protected left turn phasing on the northbound and southbound approaches.

[5] Improvements consistent with the new interchange improvements at I-215 Freeway and Scott Road.

[6] LOS reported per HCM 2000 methodology as the HCM 6 methodology does not support the proposed lane configuration.

- *Freeway Facilities*

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring

jurisdictions) on the SHS roadway segments beyond those planned as part of the I-215 Freeway and Scott Road interchange project. As such, no additional improvements have been recommended to address the EAPC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) deficiencies on the SHS. These impacts are considered significant and unavoidable.

The Project site is located within the Highway 79 Policy Area of the Harvest Valley/Winchester Area Plan. This Policy Area has been implemented to address transportation infrastructure timing as it relates to development projects. The Highway 79 Policy Area contains Policies relevant to the Project that duplicate *SCMVAP* 1.1, 2.3, and 5.1**.**

As discussed, prior:

> "*The proposed Project is with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-1** and **Mitigation Measure MM-TR-2** to address the Project the Existing Plus Ambient plus Project plus Cumulative (EAPC) for the EPAC (Phase 1 2021) and EAPC (Phase 2 Project Buildout 2025) Project scenarios. With incorporation of **Mitigation Measure MM-TR-1** and **Mitigation Measure MM-TR-2**, Project cumulative impacts will be reduced to a less than significant level.*"

In conclusion, with the incorporation of **Standard Conditions SC-TR-1**, **SC-TR-2**, and **SC-PS-1**, and **Mitigation Measures MM-TR-1** through **MM-TR-5**, the Project's direct impacts to Leon Road & Scott Road, Haun Road/Zeiders Road & Scott Road, as Project direct contributions to the cumulative scenarios will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. However, even with implementation of **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions) since the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable and cumulative.

THRESHOLD 43.b: Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Significant and Unavoidable Impact

The Riverside County Transportation Commission (RCTC) is designated as the Congestion Management Agency (CMA) to oversee the Congestion Management Program (CMP). The CMP system roadway in proximity to the Project site is Interstate-215 (I-215). The proposed Project is located approximately 2.9 miles east of I-215.

Recently, the RCTC has approved modification of the CMP Land Use Coordination Element, which includes the elimination of the Traffic Impact Assessment (TIA) report process and replaced it with an Enhanced Traffic Monitoring System. Therefore, a TIA report is no longer

required, but local jurisdictions are required to report deficient facilities (locations that cannot be mitigated to LOS E or better) along the CMP network, which are identified in traffic impact studies prepared for local agencies. Please reference the discussion in Threshold 43.a., as well as the impacts to I-215, outlined below:

E+P (Project Buildout) Conditions

The freeway mainline segment analysis indicates that the addition of Project Buildout traffic is not anticipated to result in any new LOS deficiencies, in addition to those identified under Existing (2018) and E+P (Phase 1) conditions.

The freeway ramp merge/diverge analysis indicates that the addition of Project Buildout traffic is not anticipated to result in any new LOS deficiencies, in addition to those identified under Existing (2018) and E+P (Phase 1) conditions.

EAP (Phase 1 2021) Conditions

The following freeway mainline segments are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 1 2021) traffic conditions:

- I-215 Freeway Southbound – North of Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour
- I-215 Freeway Southbound – South of Scott Road (#2) – LOS F AM peak hour; LOS E PM peak hour
- I-215 Freeway Northbound – South of Scott Road (#4) – LOS E PM peak hour only

The following ramp merge/diverge areas are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 1 2021) traffic conditions:

- I-215 Freeway – Southbound, Off-Ramp at Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour
- I-215 Freeway – Southbound, On-Ramp at Scott Road (#4) – LOS F AM peak hour only
- I-215 Freeway – Northbound, Off-Ramp at Scott Road (#6) – LOS E PM peak hour only

EAP (Phase 2 Project Buildout 2025) Conditions

The following additional freeway mainline segment is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 2 Project Buildout 2025) traffic conditions, in addition to those identified under Existing (2018) and EAP (Phase 1 2021) conditions:

- I-215 Freeway Northbound – North of Scott Road (#3) – LOS E PM peak hour only

The following additional ramp merge/diverge area is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAP (Phase 2 Project Buildout 2025) traffic conditions, in addition to those identified under Existing (2018) and EAP (Phase 1 2021) conditions:

- I-215 Freeway – Northbound, On-Ramp at Scott Road (#5) – LOS E PM peak hour only

EAPC (Phase 1 2021) Conditions

All freeway mainline segments are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAPC (Phase 1 2021) traffic conditions:

- I-215 Freeway Southbound – North of Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour
- I-215 Freeway Southbound – South of Scott Road (#2) – LOS F AM peak hour; LOS E PM peak hour
- I-215 Freeway Northbound – North of Scott Road (#3) – LOS E PM peak hour only
- I-215 Freeway Northbound – South of Scott Road (#4) – LOS E PM peak hour only

The following ramp merge/diverge areas are anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAPC (Phase 1 2021) traffic conditions:

- I-215 Freeway – Southbound, Off-Ramp at Scott Road (#1) – LOS F AM peak hour; LOS E PM peak hour
- I-215 Freeway – Southbound, Loop On-Ramp (Upstream) at Scott Road (#2) – LOS F AM peak hour, LOS E PM peak hour
- I-215 Freeway – Southbound, Loop On-Ramp (Downstream) at Scott Road (#3) – LOS F AM peak hour, LOS E PM peak hour
- I-215 Freeway – Southbound, On-Ramp at Scott Road (#4) – LOS F AM peak hour; LOS E PM Peak hour
- I-215 Freeway – Northbound, Off-Ramp at Scott Road (#6) – LOS F PM peak hour only

EAPC (Phase 2 Project Buildout 2025) Conditions

There are no freeway mainline segments anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) under EAPC (Phase 2 Project Buildout 2025) traffic conditions, in addition to those previously identified under Existing (2018), EAP (Phase 1 2021), EAP (Phase 2 Project Buildout 2025), and EAPC (Phase 1 2021) traffic conditions.

The following ramp merge/diverge area is anticipated to operate at an unacceptable LOS (i.e., LOS E or worse) during one or more peak hours under EAPC (Phase 2 Project Buildout 2025) traffic conditions, in addition to those previously identified under Existing (2018), EAP (Phase 1 2021), EAP (Phase 2 Project Buildout 2025) and EAPC (Phase 1 2021) traffic conditions:

- I-215 Freeway – Northbound, On-Ramp at Scott Road (#5) – LOS E PM peak hour only

At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the deficiencies on the SHS. Any impacts will be considered significant and unavoidable.

THRESHOLD 44.a: Would the Project include the construction or expansion of a bike system or bike lanes?

Less Than Significant Impact

Class II bicycle lanes will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic.

Therefore, the Project will not conflict with bike lanes. Impacts will be less than significant.

4.15.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Conditions SC-TR-1, **SC-TR-2**, and **SC-PS-1** are applicable to all Projects within the City and are not considered unique mitigation under CEQA.

SC-TR-1 **The Board of Supervisors of the County of Riverside and the Councils of the Cities of Western Riverside County enacted the Transportation Uniform Mitigation Fee (TUMF) to fund the mitigation of cumulative regional transportation impacts resulting from future development. The mitigation fees collected through the TUMF program will be utilized to complete transportation system capital improvements necessary to meet the increased travel demand and to sustain current traffic levels of service.**

The fee calculations are based on the proportional allocation of the costs of proposed transportation improvements based on the cumulative transportation system impacts of different types of new development. Fees are directly related to the forecast rate of growth and trip generation characteristics of different categories of new development. Payment of the TUMF is required and is not considered unique mitigation under CEQA.

SC-TR-2 **The Applicant is required to develop and implement a County-approved Traffic Control Plan (TCP) addressing potential construction-related traffic detours and disruptions. In general, the TCP will ensure that to the extent practical, construction traffic would access the Project site during off-peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses.**

SC-PS-1 **Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.**

Mitigation Measure(s)

The following Project-specific mitigation is required for Project impacts to intersections for the

following traffic analysis scenarios:

- Existing plus Project (E+P) (Phase 1) Conditions;
- E+P (Phase 2 Project Buildout) Conditions;
- Existing plus Ambient Growth Plus Project (EAP) (Phase 1 2021) Conditions;
- EAP (Phase 2 Project Buildout 2025) Conditions;
- Existing plus Ambient Growth Plus Project Plus Cumulative (EAPC) (Phase 1 2021) Conditions; and
- EAPC (Phase 2 Project Buildout 2025) Conditions.

MM-TR-1 **Phase 1 - Leon Road & Scott Road (#13) – Prior to the 1st certificate of occupancy, the applicant shall install the following improvements:**

- **Traffic Signal**
- **Northbound left turn lane**
- **Southbound left turn lane**
- **Eastbound left turn lane**
- **Westbound left turn lane**

MM-TR-2 **Phase 2 - Haun Road/Zeiders Road & Scott Road (#1) – Prior to the 1st certificate of occupancy, the applicant shall install the following improvements:**

- **Construct a 2nd southbound left turn lane.**
- **Modify the traffic signal to implement overlap phasing on the westbound right turn lane.**

It should be noted that these improvements have been conditioned on other near-by development and are to be constructed by others.

MM-TR-3 **Phase 2 - Leon Road & Scott Road (#13) – Prior to the 1st certificate of occupancy, the applicant shall install the following improvements:**

- **Traffic Signal**
- **Northbound left turn lane**
- **Southbound left turn lane**
- **Eastbound left turn lane**
- **Westbound left turn lane**
- **Overlap phasing on Southbound right turn lane**
- **2nd Eastbound through lane**
- **2nd Westbound through lane**

MM-TR-4 **Prior to the issuance of building permits, the Project applicant shall participate in the County's TUMF/DIF programs by paying the requisite TUMF/DIF fees at the time of building permit; and in addition, shall pay the Project's fair share amount of $314,011 for the improvements identified in Table 1-6 *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis Report County of Riverside,* dated June 5, 2018, prepared by Urban Crossroads (*TIA*) that are consistent with the improvements shown on Table 7-5 of the *TIA*, or as agreed to by the County and Project Applicant.**

MM-TR-5 **Table 1-6 of the *TIA* includes intersections that either share a mutual border with the City of Menifee or are wholly located within the City of Menifee that have recommended improvements which are not covered by DIF. Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Developer's fair-share amount for the intersections that either share a mutual border with the City of Menifee or are wholly located within the City of Menifee that have recommended improvements for Phase Project Buildout 2025 which are not covered by TUMF/DIF equals $87,537. Developer shall be required to pay this $87,537 amount to either the County of Riverside or City of Menifee prior to the issuance of the Project's final certificate of occupancy.**

4.15.6 Cumulative Impacts

According to the IS, the Project will have no impact that would result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; alter waterborne, rail or air traffic, or substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). Also, according to the IS, the Project would have a less than significant impact that would cause an effect upon, or a need for new or altered maintenance of roads, cause an effect upon circulation during the Project's construction (see **Standard Condition SC-TR-2**), or result in inadequate emergency access. Per the analysis above, the Project would have a less than significant impact resulting in a conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, or a conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities. No cumulative impacts will occur.

The proposed Project will contribute to the generation of additional traffic on local and regional roadways. The proposed Project is consistent with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable as well as cumulatively significant. In addition, the Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will also result in a significant cumulative impact.

4.15.7 Unavoidable Significant Adverse Impacts

The Project will be required to implement **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside

does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments. As such, no improvements have been recommended to address the deficiencies on the SHS. These impacts will also be considered significant and unavoidable.

4.16 TRIBAL CULTURAL RESOURCES

4.16.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of tribal cultural resources from implementation of the Project. The Tribal Cultural Resources Section of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

45. Tribal Cultural Resources

a. Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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 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); or,

b. Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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 a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in 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 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe.

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 45.a and 45.b, related to tribal cultural resources (in the questions asked above), **would** require further analysis in the DEIR.

Standard Condition SC-CUL-1, presented in the IS that shall be carried over to this DEIR. There are no mitigation measures presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *Assembly Bill 52 (AB 52) Formal Notification (TTM 37439, CZ 1800007)*, prepared by County of Riverside, April 2, 2018 (**Appendix L**)
- *A Phase I Cultural Resources Assessment of Tentative Tract No. 37439 and Associated Off-Site Infrastructure Improvements*, prepared by Jean A. Keller, Ph.D., March 2018 (*CRA,* **Appendix E**)
- *Riverside County General Plan (Multipurpose Open Space Element)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- *Sun City/Menifee Valley Area Plan, December 13, 2016 (SCMVAP)* http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.pdf?ver=2017-10-06-094255-673
- *Title 14 California Code of Regulations (14 Cal. Code Regs.) §15064.5* https://www.dir.ca.gov/dlse/CCR.htm

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

Comment Letter #2 was received from the Native American Heritage Commission (dated October 12, 2018) regarding land use and planning in response to the NOP. Within this comment letter were the following comments pertaining to tribal cultural resources:

- The lead agency (County) must consult with all Tribes that are traditionally and culturally affiliated with the Project's geographical area as early as possible to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.
- Utilize the CEQA Guidelines for consultation pursuant to Assembly Bill 52 (AB52).
- Utilize CEQA Guidelines for consultation pursuant to Senate Bill 18 (SB18).
- Utilize the following recommendations for Cultural Resources Assessments:
  - Contact the appropriate regional California Historical Research Information System Center for an archaeological records search.
  - Conduct an archaeological inventory survey, if required, and submit report per requirements.
  - Contact Native American Heritage Commission for a Sacred Lands File search and for a Native American Tribal Consultation List to inform consultation and plan for avoidance, preservation in place, or failing both, mitigation.

Response: Consistent with AB52, consultation occurred with the Tribes that are traditionally and culturally affiliated with the Project's geographical area. This consultation has been completed.

No comments regarding tribal cultural resources were received at the Scoping Meeting held on November 5, 2018.

Therefore, the above issues 45.a and 45.b, are the focus of the following evaluation of tribal cultural resources.

The reader is encouraged to review the information contained in Subchapter 4.6, Cultural Resources of this DEIR for additional information as it pertains to historic and archaeological resources.

The following discussions are abstracted from the above referenced technical studies, which are provided in Volume 2 of the DEIR, the Technical Appendices.

4.16.2 Environmental Setting

4.16.2.1 Existing Conditions

In order to reduce redundancies of analysis, please refer to the discussion of the environmental setting contained in Subchapter 4.6, Cultural Resources Section 4.6.2 (Environmental Setting) of this DEIR, as it also applies to tribal cultural resources. Pertinent information is contained in the following Sections in Subchapter 4.6:

- 4.6.2.1.a Topography and Geology;
- 4.6.2.2.b Biology;
- 4.6.2.3.c Climate;

- 4.6.2.1d Discussion of Environmental Setting;
- 4.6.2.2 Cultural Setting
  - 4.6.2.2.a Prehistory;
  - 4.6.2.2.b Ethnography; and
  - 4.6.2.2.c History.

4.16.2.2 Regulatory Setting

4.16.2.2.a Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) authorized the National Register of Historic Places and coordinates public and private efforts to identify, evaluate, and protect the nation's historical and archaeological resources. The National Register includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review refers to the federal review process designed to ensure that historical properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process, with assistance from state historic preservation offices.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

4.16.2.2.b State

California Public Resources Code

Archaeological, paleontological, and historical sites are protected by a wide variety of state policies and regulations under the California Public Resources Code. In addition, cultural and paleontological resources are recognized as nonrenewable and therefore receive protection under the California Public Resources Code (PRC) and the California Environmental Quality Act (CEQA).

- California Public Resources Code 5020–5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- California Public Resources Code 5079–5079.65 defines the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of

federally and state-mandated historical preservation programs in California and the California Heritage Fund.

- California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.
- California Public Resources Code 5097.98 states that "in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation...until the coroner...has determined...that the remains are not subject to...provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible.... The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and... has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission." This is reflected in **Standard Condition SC-CUL-1**, as outlined in Section 4.16.5.

State California Environmental Quality Act (CEQA) Guidelines Section 15064.5(a)(1)-(3)

CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "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" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. 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.
4. Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

Assembly Bill 52

Assembly Bill 52 (AB52) specifies that a project that may cause a substantial adverse change to a defined Tribal Cultural Resource (TCR) may result in a significant effect on the environment. AB52 requires tribes interested in development projects within a traditionally and culturally affiliated geographic area to notify a lead agency of such interest and to request notification of future projects subject to CEQA prior to determining if a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. The lead agency is then

required to notify the tribe within 14 days of deeming a development application subject to CEQA complete to notify the requesting tribe as an invitation to consult on the project. AB52 identifies examples of mitigation measures that will avoid or minimize impacts to a TCR. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of intent to adopt a negative declaration/mitigated negative declaration circulated on or after July 1, 2015. AB52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California PRC, relating to Native Americans.

4.16.2.2.c Local

General Plan Policies

The following are the applicable Plan Goals and Policies from the General Plan Multipurpose Open Space Element:

- **Policy OS 19.1** Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside.
- **Policy OS 19.2** The County of Riverside shall establish a Cultural Resources Program in consultation with Tribes and the professional cultural resources consulting community that, at a minimum would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; curation and the descendant community consultation requirements of local, state and federal law.
- **Policy OS 19.3** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.
- **Policy OS 19.5** Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

The following are the applicable Plan Goals and Policies from the Sun City / Menifee Valley Area Plan:

- **Policy SCMVAP 12.1**: Protect the Sun City/Menifee Valley's historical, archaeological, cultural, and paleontological resources through adherence to applicable policies found within the Cultural Resources and Paleontological Resources sections of the General Plan Multipurpose Open Space Element.

4.16.3 Thresholds of Significance

As discussed in Section 4.16.1, the Project impacts to two (2) criteria pertaining to tribal cultural resources will be analyzed. According to the IS, the Project would have a significant impact if it would:

45. Tribal Cultural Resources

a. Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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 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); or,

b. Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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 a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in 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 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe.

The questions posed in the County's IS are included for each topical section to guide the impact analysis and the above significance criteria represent a summary of the thresholds raised in the IS. The potential tribal cultural resources changes in the environment are addressed in response to the above thresholds in the following analysis.

4.16.4 Potential Impacts

THRESHOLD 45.a,b: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 Cultural Native American tribe, and that is 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); or would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 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 Cultural Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant Impact with Mitigation Incorporated

Based on the County's prior experience with and written request from potentially interested Tribes, AB52 Notices were sent to the following nine (9) Tribes on April 2, 2018:

- Cahuilla Band of Indians;
- Colorado River Indian Tribes (CRIT);
- Morongo Band of Mission Indians;
- Pala Band of Mission Indians;
- Pechanga Band of Mission Indians;
- Quechan Indian Nation;
- Ramona Band of Cahuilla Mission Indians;
- Rincon Cultural Resources Department; and
- Soboba Band of Luiseño Indians.

No response was received from the Cahuilla Band of Indians, the Colorado River Indian Tribe, the Ramona Band of Cahuilla Mission Indians or the Quechan Indian Nation. The Pala Band of Mission Indians declined to consult.

Consultation with the Morongo Band of Mission Indians took place on April 25, 2018 and the Project exhibits were provided the same day. The *CRA* was sent to the Morongo Band of Mission Indians on May 22, 2018 and the Project conditions of approval were sent on May 30, 2018. The Morongo Band of Mission Indians concurred with the conditions of approval and consultation was concluded on November 6, 2018.

The *CRA* was provided to the Pechanga Band of Mission Indians on May 22, 2018 along with an invitation for a face-to-face meeting. No response was received from the group and the project conditions of approval were sent to them on May 30, 2018. Finally, an email asking if the band had any further comments or concerns was sent on July 11, 2018 with no response from the Pechanga Band of Mission Indians.

Consultation was held with the Soboba Band of Luiseño Indians on July 30, 2018. The Soboba Band of Luiseño Indians asked that there be a place for reburial onsite should any unanticipated resources be identified during ground disturbing activities.

The Conditions of Approval were provided to the Rincon Band of Luiseño Indians; the Rincon Band are in agreement with the Conditions and indicated on January 18, 2019 that consultation was concluded.

No tribal cultural resources were identified by any of the consulting tribes. Consultation, pursuant to AB52 has been completed.

However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6** (see Section 4.16.5), will be implemented. With **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, impacts to tribal cultural resources will remain less than significant.

4.16.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

Standard Condition SC-CUL-1, below, was identified in the IS in order to ensure that the Project's potential to affect human remains (which may be encountered during ground-disturbing activities) would remain less than significant:

SC-CUL-1 If Human Remains Found. If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5.

Mitigation Measure(s)

Because the Project site has experienced severe ground disturbances in the past, any buried archaeological and/or cultural resources would have already been uncovered or destroyed. However, in the unlikely event that archeological and/or cultural materials are uncovered during ground-disturbing activities, **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, below, are provided to reduce potential adverse archaeological and/or cultural resource impacts to a less than significant level:

MM-CUL-1 Conduct Archaeological Sensitivity Training for Construction Personnel. The Applicant must retain a qualified professional archaeologist, approved by the Community Development Director, or designee, who meets U.S. Secretary of the Interior's Professional Qualifications and Standards, to conduct an Archaeological Sensitivity Training for construction personnel before commencing excavation activities. The training session must be carried out by a cultural-resources professional with expertise in archaeology, who meets the U.S. Secretary of the Interior's Professional Qualifications and Standards. The training session will include a handout and will focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event, the duties of archaeological monitors, and, the general steps a qualified professional archaeologist would follow in conducting a salvage investigation if one is necessary.

MM-CUL-2 Unanticipated Resources. The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed: All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the applicant shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to**

be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.
*** A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other.**
**** If not already employed by the project developer, a County approved archaeologist shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary.**

MM-CUL-3 **Native American Monitor. Prior to the issuance of grading permits, the developer/permit applicant shall enter into an agreement with the consulting tribe(s) for a Native American Monitor. The Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the Project site including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American 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. The developer/permit applicant shall submit a fully executed copy of the agreement to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.**

MM-CUL-4 **Project Archaeologist. Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program. A Cultural Resource Monitoring Plan shall be developed that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a wet-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Project Archaeologist.**

MM-CUL-5 Artifact Disposition. Prior to Grading Permit Final Inspection, the landowner(s) shall relinquish ownership of all cultural resources that are unearthed on the Project property during any ground-disturbing activities, including previous investigations and/or Phase III data recovery. Historic Resources- all historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, 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 Prehistoric Resources- One of the following treatments shall be applied. a. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures to protect the reburial area from any future impacts. Reburial shall not occur until all required cataloguing, analysis and studies have been completed on the cultural resources, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial processes 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 County under a confidential cover and not subject to a Public Records Request. b. If reburial is not agreed upon by the Consulting Tribes then the resources shall be curated at a culturally appropriate manner at the Western Science Center, 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 County. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains.

MM-CUL-6 Phase IV Cultural Report. Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures stipulated in the Cultural Resources Management Plan.

4.16.6 Cumulative Impacts

The cumulative study area for tribal cultural resources is the geographical area of the County of Riverside, which is the geographical area covered by the County General Plan, including all goals and policies included therein, as well as the historic tribal area contained therein. Future development in the County could include excavation and grading that could potentially impact tribal cultural resources and human remains. The cumulative effect of the proposed Project is the continued loss of these resources. The proposed Project, in conjunction with other development in the County, has the potential to cumulatively impact tribal cultural resources; however, it should be noted that each development proposal received by the County undergoes environmental review pursuant to CEQA. If there is a potential for significant impacts to tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface tribal cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the County's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the County.

With implementation of **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, the contribution of the proposed Project to the cumulative loss of known and unknown tribal cultural resources throughout the County would be reduced to a less than significant level.

4.16.7 Unavoidable Significant Adverse Impacts

Based on the information presented above, all potential tribal cultural resources impacts would be limited and can be reduced to a less than significant impact level with adherence to **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to tribal cultural resources from implementing the Project as proposed. The Project tribal cultural resource impacts are less than significant.

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4.17 UTILITIES AND SERVICE SYSTEMS

4.17.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of utilities and service systems from implementation of the Project. The Utilities and Service Systems Section, of the IS, located in Chapter 8, *Appendices* of this DEIR, posed the following questions:

Would the Project:

46. Water.

a. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?
b. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

47. Sewer.

a. Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?
b. Result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

48. Solid Waste.

a. Is the Project served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?
b. Does the Project comply with federal, state, and local statutes and regulations related to solid wastes (including the CIWMP (County Integrated Waste Management Plan)?

49. Utilities.

Would the Project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?

a. Electricity?
b. Natural gas?
c. Communications systems?
d. Storm water drainage?
e. Street lighting?
f. Maintenance of public facilities, including roads?
g. Other governmental services?

50. Energy Conservation.

a. Would the Project conflict with any adopted energy conservation plans?

Based on the analysis in the IS it was determined that the questions pertaining to issue areas 48.a, 48.b, 49.c, 49.e, 49.f, 49.g, and 50.a, related to utilities and service systems (in the questions asked above), **would not** require any further analysis in the DEIR. As it pertains to these questions, the IS identified either "no impact" or "less than significant impact" as a result of implementation of the Project.

Based on the analysis in the IS, the remaining seven (7) issue areas, 46.a, 46.b, 47.a, 47.b, 49.a, 49.b and 49.d, related to utilities and service systems in the questions asked above, **would** be further analyzed in the DEIR.

However, subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. The text in 46.a., 46.b., and 47.a, was revised. 49.d.was deleted. These revisions will be reflected in the DEIR.

Therefore, the following six (6) issue areas will be analyzed in the DEIR:

46. Water.

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would 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?

47. Sewer.

a. Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?
b. Result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

49. Utilities.

Would the Project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?

a. Electricity?
b. Natural gas?

Standard Condition SC-PS-1 (development impact fees) shall be carried over to this DEIR.

No mitigation measures were presented in the IS that shall be carried over to this DEIR.

In addition to the IS, the following sources were used in the evaluation presented in this Subchapter:

- *Water Supply Assessment Report, Canterwood Project*, prepared by Eastern Municipal Water District, February 21, 2018 (*WSA*, **Appendix N**)
- *San 53* (*Sewer and Water Availability) APNs 466-310-002, 466-310-026*, prepared by Eastern Municipal Water District, February 5, 2018 (Will Serve, **Appendix O**)
- *Canterwood (Tentative Tract Map No. 37439) Energy Analysis, County of Riverside*, prepared by Urban Crossroads, February 27, 2019 (*Energy Analysis*, **Appendix Q**)
- *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**)
- California Energy Commission, Summer 2012 Electricity Supply and Demand Outlook, *May 2012*
  http://www.energy.ca.gov/2012publications/CEC-200-2012-003/CEC-200-2012-003.pdf
- California Energy Commission, Preliminary California Energy Demand Forecast 2012-2022, August 2011
  http://www.energy.ca.gov/2011publications/CEC-200-2011-011/CEC-200-2011- 011-SD.pdf
- California Gas & Electric Utilities, *California Gas Report-Southern California Gas Company,* 2006
- National Pipeline Mapping System website
  https://pvnpms.phmsa.dot.gov/PublicViewer/
- Eastern Municipal Water District (EMWD), 2015 Urban Water Management Plan (*2015 UWMP*), June 2016
  https://www.emwd.org/home/showdocument?id=1506
- Metropolitan Water District (MWD), 2015 Regional Urban Water Management Plan (*2015 RUWMP*), June 2016
  http://www.mwdh2o.com/PDF%202016%20Background%20Materials%20Part%202/Metropolitan%20Draft%202015%20UWMP%20to%20MAs%20-%20Full%20Report%2012-17-2015_HiRes.pdf
- Eastern Municipal Water District website
  www.emwd.org
- Water Efficient Guidelines for New Development, July 19, 2013
  http://www.emwd.org/home/showdocument?id=6987
- Riverside County Ordinance No. 859
  https://www.rivcocob.org/wp-content/uploads/2009/10/859.3.pdf
- EMWD Consolidated Schedule of Rates, Fees and Charges (proposed for February 21, 2018 Board Approval)
  https://www.emwd.org/home/showdocument?id=6281
- EMWD Charges and Deposits
  https://www.emwd.org/construction/developer-project-help-desk/charges-and-deposits#sewer
- Eastern Municipal Water District Comprehensive Annual Financial Report EMWD For the Fiscal Year Ended June 30, 2017
  https://www.emwd.org/home/showdocument?id=16318

- EMWD Capital Improvement Program Update, Power Point Presentation, prepared by Joe Mouawad, P.E., dated November 9, 2016 https://board.emwd.org/Citizens/FileOpen.aspx?Type=4&ID=5620&MeetingID=1493
- EMWD Capital Improvement Program Update (*CIP Update*) http://docplayer.net/42139514-Capital-improvement-program-update.html

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding utilities and service systems were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018.

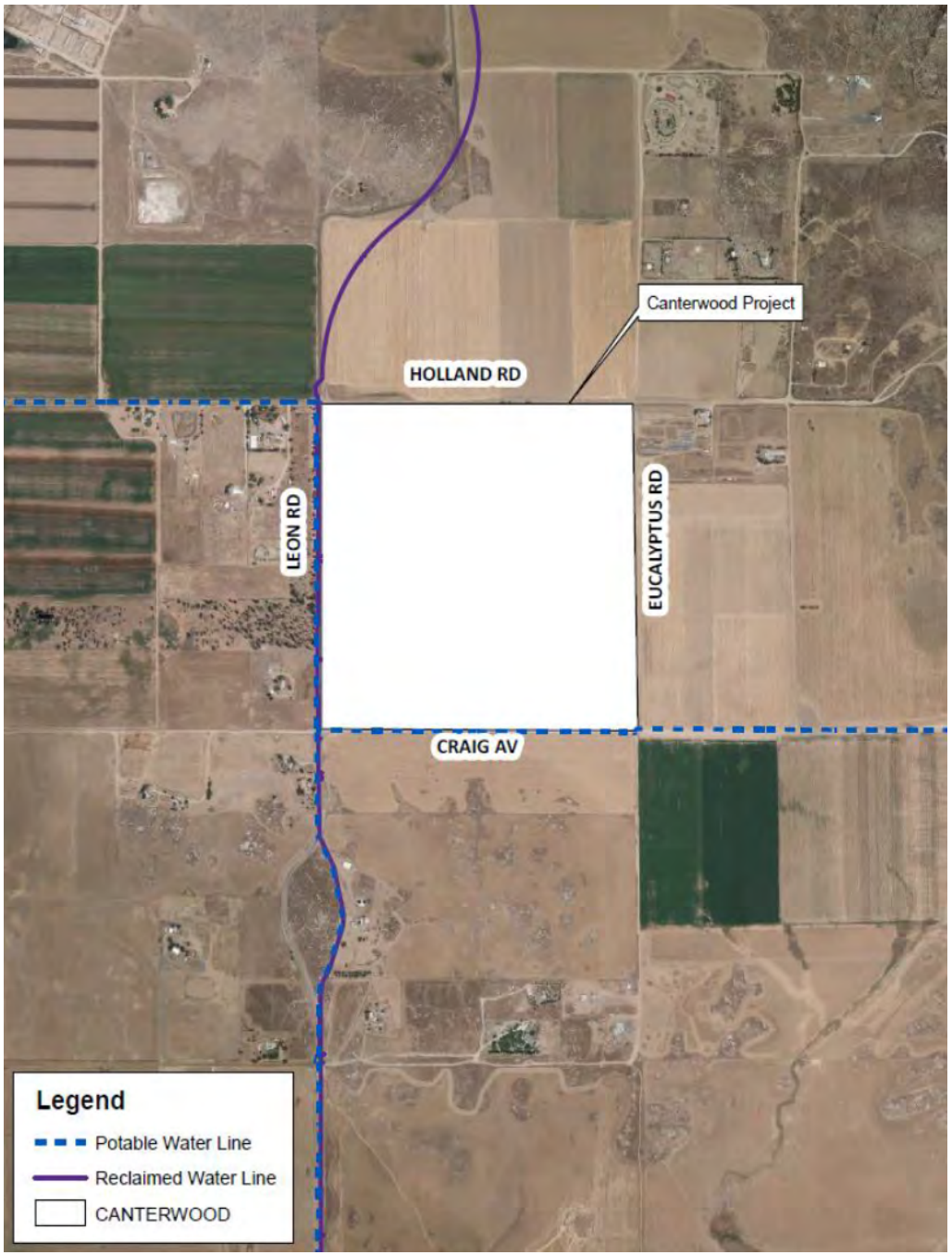
Therefore, the above issues 46.a through 47.b, 49.c, 49.e. through 49.g, and 50.a, are the focus of the following evaluation of utilities and service systems.

4.17.2 Environmental Setting

4.17.2.1 Water

Water service for potable residential use and fire service to the proposed Project will be provided by Eastern Municipal Water District (EMWD). The proposed Project will connect to an existing 48" EMWD water main located in Leon Road and an existing 30" EMWD water main located in Craig Avenue. Reference **Figure 4.17-1, *Project Location in Relation to Existing Waterlines***.

FIGURE 4.17-1
PROJECT LOCATION IN RELATION TO EXISTING WATERLINES



Source: WSA (**Appendix N**)

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The proposed Project is comprised of approximately 158 acres in the County of Riverside and consists of a master-planned, low- and medium-density residential community of up to 574 dwelling units, along with roughly 26 acres of open space for conservation. The land use considered for the Project area in Eastern Municipal Water District (EMWD), 2015 Urban Water Management Plan (*2015 UWMP*) demand projection was medium-density residential. These land uses are consistent with the proposed Project as described herein.

In conjunction with the entitlement effort for the proposed Project, a Water Supply Assessment (*WSA*) report was prepared and issued by EMWD, dated February 21, 2018.

As set forth in the *WSA* (Requirements, p.1), EMWD has confirmed that the projected demand from the proposed Project is within the limits of demand accounted for in the *2015 UWMP*, which was adopted in June 2016.

WSA Purpose

Water Code 10910 (a) (b) (c)

The purpose of the *WSA* is to satisfy the requirements under Senate Bill 610 (SB610), Water Code Section 10910 et seq., Senate Bill 221 (SB221), and Government Code Section 66473 that adequate water supplies are or will be available to meet the water demand associated with a proposed Project.

- SB610 focuses on the content of a water supply agency's Urban Water Management Plan (UWMP) and stipulates that when an Environmental Impact Report (EIR) is required in connection with a project, the appropriate water supply agency must provide an assessment on whether its total projected water supplies will meet the projected water demand associated with the proposed project.
- SB610 applies to a proposed residential development of more than 500 dwelling units, or large commercial, industrial or mixed use development.
- SB221 requires water supply verification when a tentative map, parcel map, or development agreement for a project is submitted to a land use agency for approval.
- SB221 applies to proposed residential development of more than 500 dwelling units with some exceptions.

The need for an assessment or verification is determined by the lead agency for the project, which in the subject instance for the proposed Canterwood Project is the County of Riverside.

CEQA, Section 15206

Per Section 15206 of the State CEQA Guidelines, if a project has the potential for causing significant effects on the environment extending beyond the city or county in which the project would be located it is considered a project of statewide, regional or area wide significance. CEQA provides examples of the significant effects that a project could cause such as generating significant amounts of traffic or interfering with the attainment or maintenance of state or national air quality standards.

- Section 15206 explicitly identifies projects subject to this subdivision to include proposed residential developments of more than 500 dwelling units.

The proposed Project includes more than 500 dwelling units and, therefore, it meets the criteria of statewide, regional, or area wide significance.

EMWD Background

EMWD was formed in 1950 and annexed into the Metropolitan Water District of Southern California (MWD) in 1951 to deliver imported water. In 1971, EMWD assumed the additional role of a groundwater producer with the acquisitions of the Fruitvale Mutual Water Company.

Presently, EMWD has four sources of water supply:

- Potable groundwater;
- Desalinated groundwater;
- Recycled water; and
- Imported water from MWD.

EMWD provides both retail and wholesale water supplies to a service area encompassing over 500 square miles with an estimated population of over 760,000 people. Agencies through which EMWD provides water supplies indirectly via wholesale service include the following:

- City of Hemet Water Department;
- City of Perris / North Perris Water System;
- City of San Jacinto Water Department;
- Lake Hemet Municipal Water District (LHMWD);
- Nuevo Water Company;
- Rancho California Water District.

EMWD Urban Water Management Plan

In June of 2016, the EMWD Board of Directors adopted the *2015 UWMP*. This plan details 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.

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.

Consistent with the significant percentage of undeveloped land within EMWD's service area, growth is anticipated to continue throughout the *2015 UWMP* 25-year planning horizon. 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.

As shown below in **Table 4.17-1, *Projected Population (2020 – 2040)***, the population in EMWD's service area over the 20 year projection period between 2020 and 2040 is forecast to increase by 418,500 people, from 856,500 (2020) to 1,274,600 (2040), a projected increase of 49%.

Table 4.17-1
Projected Population (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

Source: *WSA*, February 21, 2018, p. 4.

Overview of Supplies

EMWD has four sources of water supply: 1) imported water purchased from MWD, 2) local potable groundwater, 3) local desalinated groundwater, and 4) 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.

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.

An annual breakdown of EMWD's supplies is shown below in **Table 4.17-2, *Water Supply Portfolio (AF)***, which summarizes information from the *2015 UWMP*.

Table 4.17-2
Water Supply Portfolio (AF)

Type	Source	2010	2011	2012	2013	2014	2015
Imported – MWD Treated	Metropolitan Water District	60,700	58,600	65,300	65,700	70,200	43,400
Imported – EMWD Treated	Metropolitan Water District	16,600	16,300	18,300	18,200	21,600	18,600
Imported – Raw	Metropolitan Water District	11,400	14,200	10,700	15,900	15,300	16,200
Groundwater	San Jacinto River Groundwater Basin	15,700	17,500	15,500	18,800	12,000	15,300
Desalination	San Jacinto River Groundwater Basin	5,800	5,700	5,700	4,800	6,800	7,300
Recycled	Regional Water Reclamation Facilities	47,300	46,500	46,800	48,900	48,000	45,400
Total		157,500	158,800	162,300	172,300	173,900	146,200

Source: *WSA*, February 21, 2018, p. 5.
Notes:
[1] Groundwater totals may include raw, brackish groundwater used to augment recycled water system (served to agricultural customers). Portions of the groundwater basin from which EMWD pumps potable groundwater are adjudicated under the Hemet-San Jacinto Watermaster and subject to adjusted base production rights.
[2] Refers to flow effluent from EMWD's desalination facilities (as opposed to total pumping from brackish wells, which are the influent flow).

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 4.17-3, *Projected Water Supplies – Average Year Hydrology*, shows EMWD's projected water supplies for both retail and wholesale service throughout the planning horizon set within *2015 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.

Table 4.17-3
Projected Water Supplies – Average Year Hydrology

Type	Source	2020	2025	2030	2035	2040
Imported Water	Metropolitan Water District	131,697	143,197	158,197	172,797	186,897
Groundwater	San Jacinto River Groundwater Basin	12,303	12,303	12,303	12,303	12,303
Desalination	San Jacinto River Groundwater Basin	7,000	10,100	10,100	10,100	10,100
Recycled Water	Regional Water Reclamation Facilities	46,901	53,100	55,200	57,400	58,900
Total		197,901	218,700	235,800	252,600	268,200

Source: *WSA*, February 21, 2018, p. 7.
Notes:
[1] Includes 7,500 acre-feet annually to be delivered by MWD to meet the Soboba Settlement Agreement.
[2] Portions of the groundwater basin from which EMWD pumps potable groundwater are adjudicated under the Hemet-San Jacinto Watermaster and subject to adjusted base production rights.

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.

Wholesale Water Supplies

Written Contracts or Other Proof of Entitlement

EMWD is one of the 26 member agencies that make up MWD. The statutory relationship between MWD and its member agencies establishes the scope of EMWD's entitlements from MWD. Typically there are no set limits on supply quantities to member agencies and MWD has provided evidence in the 2015 UWMP – MWD that its supplies will meet member agency demands during normal, single-dry, and multiple-dry years within a 20-year projection.

During unprecedented shortage events, the MWD Water Supply Plan (WSAP) is implemented, requiring a reduction in demand by member agencies. The allocation plan takes into account member agency population growth and investments in local resources. Member agencies are allocated a portion of their anticipated demand with the assurance that a member agency will not see a retail shortage greater than the regional shortage. Water supply is not limited under the allocation plan but water use above a member agency's allocation is charged at a much higher rate. In 2015, after four years of dry conditions, MWD implemented Condition Three of its Water Supply Allocation Plan to preserve stored water. This action follows the principles in the Water Surplus and Drought Management Plan as described in the 2015 UWMP – MWD.

During the allocation from MWD, EMWD implemented demand reduction strategies as outlined in its Water Shortage Contingency Plan and reduced imported demand below the allocation level. In 2016, MWD rescinded Condition 3 and declared a "Water Supply Alert" (Condition 2).

In 2014, the governor declared the State of California to be in a state of emergency due to drought. Beginning in June of 2015, urban water suppliers, including member agencies of MWD, have been subject to a mandatory conservation standard relative to 2013 demands under the emergency regulation enacted by the SWRCB. EMWD was initially subject to a mandatory conservation standard of 28 percent. In 2016, the SWRCB relaxed the mandatory conservation standards on an interim basis due to slight improvement in the statewide drought conditions; this was followed by an end to the declared drought emergency in April 2017. However, the SWRCB may implement either permanent conservation regulations or another temporary conservation order based on future hydrologic conditions in the state.

Metropolitan Water District of Southern California Supplies

EMWD relies on MWD to provide the majority of its potable water supply and a small percent of its non-potable water supply. The northern portion of EMWD's service area is supplied by MWD's Mills Water Filtration Plant (WFP), while the southeastern portion of EMWD's service area is supplied by MWD's Skinner WFP. Untreated water from MWD is treated at EMWD's Perris and Hemet WFPs, and is also delivered directly to a number of agricultural and wholesale customers.

The majority of new water demands caused by growth are to be met through additional imported water from MWD, although increases in local supplies such as brackish groundwater desalination and recycled water are expected to offset this to an extent. The 2015 UWMP-MWD concludes that MWD will have a reliable source of water to meet member agency needs through 2040 and includes reliability analysis for historic single-dry and multiple-dry years. Unprecedented shortages are addressed in the Water Shortage Contingency Analysis and Catastrophic Supply Interruption Planning portions of the UWMP-MWD.

Metropolitan Water District of Southern California – UWMP

The 2015 UWMP-MWD provides information about MWD's supply reliability and projected demands. MWD does not provide supply projections for each member agency; instead, MWD uses a regional approach to developing projections. Demand for the entire Southern California region is calculated, and then, based on available information about existing and proposed local projects, MWD determines the amount of imported water needed during future years. EMWD staff coordinated with MWD on the UWMP-MWD, exchanging information about demands, local supply projects, and population projections.

Based on the information provided by EMWD and other member agencies, MWD states that it is able to meet projected demands for all member agencies through 2040, even during dry periods. Under extreme conditions, water supplies could be allocated using the WSAP to preserve supplies in storage. The 2015 UWMP-MWD is included as Appendix B of the *WSA*.

Local Resources

In an effort to reduce dependency of imported water from MWD and increase overall system reliability, EMWD has developed several programs to take advantage of local resources. High-quality groundwater is a source of water for local customers within the Hemet/San Jacinto area, as well as a limited area in Moreno and Perris Valley. EMWD also operates two desalination facilities (with a third in design) to take advantage of a region of brackish groundwater located within its service area. The product water from the desalination facilities is fed into the EMWD's potable distribution system.

Groundwater

Groundwater information is included in the Canterwood Project WSA to assist the lead agency in determining the adequacy of EMWD's total supply. Groundwater is not being proposed to serve the Canterwood Project, as EMWD considers current groundwater production to be utilized completely by existing customers. New developments, including the Proposed Project, will be supplied with additional imported water from one of the following sources: (1) treated imported water from MWD; (2) untreated imported water from MWD, which is subsequently treated by EMWD; or (3) untreated imported water treated by EMWD and recharged into the San Jacinto River Groundwater Basin for later withdrawal.

The *2015 UWMP* discusses projected groundwater use by EMWD and explains assumptions made about groundwater. The reader is referred to Sections 2.4.1 through 2.4.9 of the *WSA* which pertains to applicable portions of the *2015 UWMP* relative to groundwater basin descriptions, management zones within the EMWD Service Area, and Groundwater Management Plans (inclusive of the Hemet/San Jacinto Groundwater Management Plan and the West San Jacinto Groundwater Basin Management Plan), for additional details. This information was included in the Canterwood Project WSA for informational purposes only. As stated above, the water supply for the proposed Project will not include groundwater.

Past Groundwater Extraction

Historic groundwater extractions by EMWD are documented in **Table 4.17-2**. The majority of EMWD's groundwater is extracted from the Hemet/San Jacinto area, with the remainder coming from the area covered by the WSJ Management Plan. The general location of wells and desalination facilities are shown in **Figure 4.17-2, *Location of Supply Sources***.

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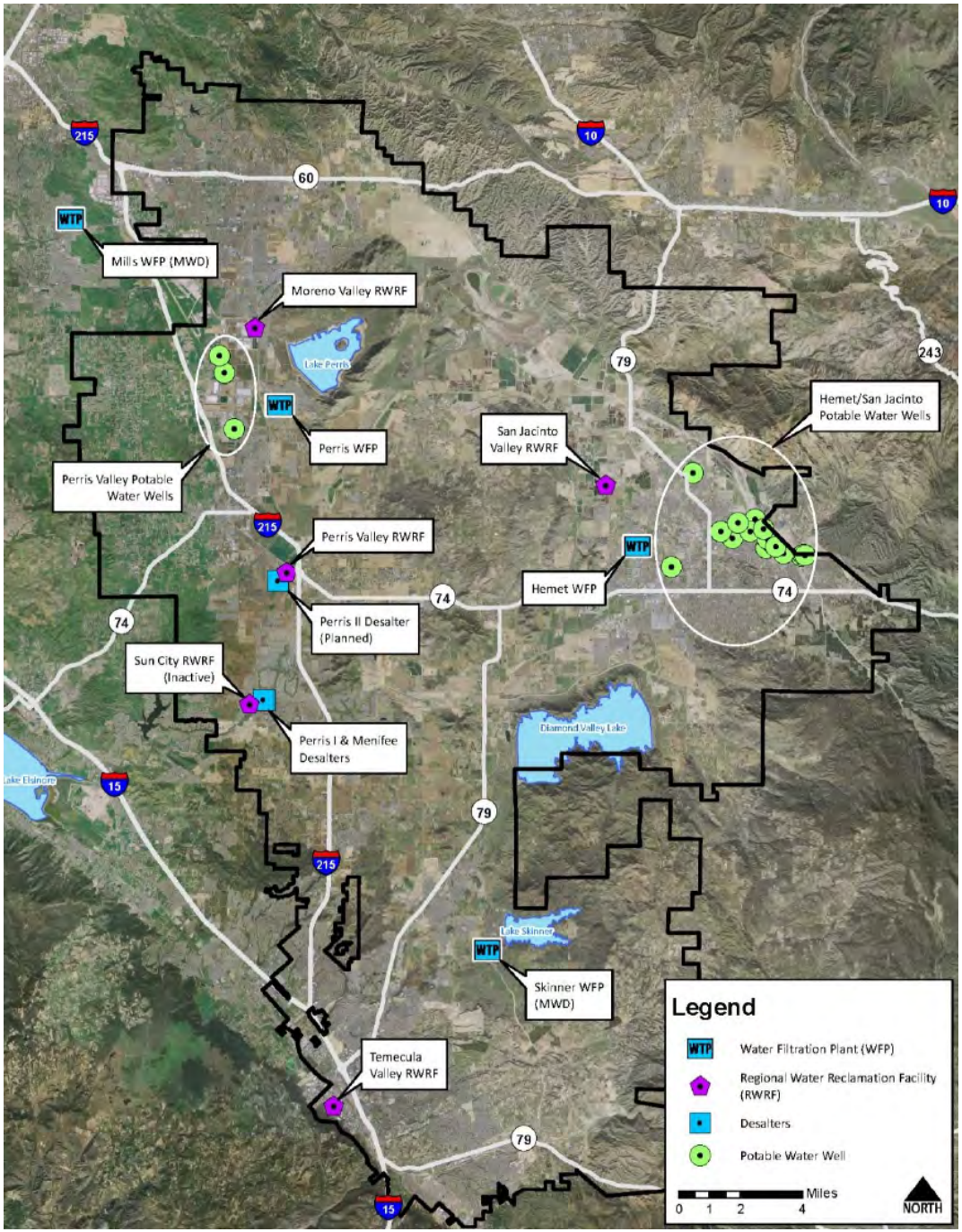
FIGURE 4.17-2
LOCATION OF SUPPLY SOURCES



Source: WSA (**Appendix N**)

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Projected Groundwater Extraction

EMWD's projected groundwater supplies are shown in **Table 4.17-3**. Groundwater produced from the Hemet/San Jacinto area is adjudicated by the Hemet-San Jacinto Watermaster. For 2018, EMWD has a base production right of 7,469 AF. This will step down annually to a long term base production right of 7,303 AF. Any pumping above the base production right will be subject to replenishment fees or offset by groundwater recharge. Groundwater production outside the Hemet/San Jacinto area is not restricted and includes EMWD's wells located in Moreno Valley and North Perris, as well as the wells feeding EMWD's desalter system. The general locations of the facilities shown in **Figure 4.17-2**, are anticipated to remain consistent for the foreseeable future.

Analysis of the Sufficiency of Groundwater

Protecting the groundwater supply available to EMWD is an important part of the District's planning efforts. EMWD is actively working with other agencies and groups to ensure that groundwater will continue to serve as a reliable water resource in the future. This effort includes the replacement of groundwater extracted beyond a given basin's safe yield.

EMWD extracts groundwater within its service area under the HSJ and WSJ Management Plans. Under the HSJ Management Plan, imported water will be recharged in the Hemet/San Jacinto area to support groundwater extractions, while pumping in the WSJ area will remain relatively constant.

The groundwater produced by EMWD is allocated towards meeting existing demands. Although the planned expansion of the District's desalination facilities will provide an additional supply of water, the amount will not be sufficient to accommodate the proposed growth within the District's service area.

The majority of the increased water demand created by the proposed Canterwood Project will be met by increasing the use of imported water from MWD, recognizing the conditions of approval outlined in the *WSA*.

Recycled Water

Recycled water is used extensively in EMWD's service area in place of potable water. This offset to municipal demand comes from recycled water used to irrigate landscape and for industrial purposes. The majority of EMWD's agricultural customers also use recycled water, in some cases, in lieu of groundwater production.

EMWD's recycled water supply will expand as the population within EMWD's service area continues to grow. EMWD currently uses all of its recycled water and is limited only by the amount available to serve during peak demands and by system losses. EMWD stores recycled water during low demand periods and does not discharge recycled water. The District

anticipates that this will continue even as the supply grows via programs to retrofit additional landscape customers currently using potable water and future indirect potable recharge.

Water Use Efficiency Measures

The Water Conservation Act of 2009 (SBx7-7) set a requirement for water agencies to reduce their per capita water use by the year 2020. The overall goal is to reach a statewide reduction of per capita urban water use of 20 percent by December 31, 2020, with an intermediate 10 percent reduction by December 31, 2015. Demand reduction can be achieved through both conservation and the use of recycled water as a potable demand offset.

EMWD's conservation effort primarily utilizes three methodologies:

1. Budget Based Tiered Rates – EMWD implemented a tiered rate billing structure for its residential and landscape customers in April of 2009. Customers are provided an allocation for reasonable water use and are required to pay a higher rate for water use over their allocated limit. A study by the University of California, Riverside showed that budget based rates reduced demand from existing residential customers by 15 percent;
2. Water Use Efficiency Requirements for New Development – These requirements focus on the installation of lower water use landscape and interior fixtures. Water use efficiency is mandated statewide through existing ordinances, plumbing codes, and legislation. To enforce water use efficiency, EMWD has lowered the water budget allocations for new developments. Any residential or dedicated landscape account installed after January 1, 2011, has an outdoor budget allocation based on only 70 percent of evapotranspiration (ET) and non-functional turf is prohibited. Similar accounts installed after April 2015, have an outdoor budget allocation that is reduced to 50 percent of ET. As of January 2018, accounts with an outdoor budget allocation of 100 percent of ET have been reduced to 80 percent of ET; and
3. Active Conservation Program – EMWD implements a variety of water use efficiency programs that encourage the replacement of inefficient devices and includes monetary rebates, distribution, and direct installation programs.

In addition to these outlined conservation efforts, EMWD continues to expand its recycled water system to offset potable demand.

Local Resources Documentation

Written Contracts or Other Proof

The following is a list of documents related to EMWD's local water supply:

- EMWD 2015 Urban Water Management Plan (June 2016): EMWD's 2015 Urban Water Management Plan is included as Appendix A of the Canterwood Project WSA. This plan supplies additional information on EMWD, its service area, water management, and supply capabilities.

- Hemet/San Jacinto Groundwater Management Area – 2016 Annual Report (June 2017): This annual report contains detailed information on the history and progress of groundwater management and the groundwater monitoring program in the Hemet/San Jacinto area. This report can be found on EMWD's website.
- Hemet/San Jacinto Groundwater Management Area – Water Management Plan: This plan was developed by stakeholders in the Hemet/San Jacinto area to provide a foundation to guide and support responsible water management into the future. The plan was finalized in 2007.
- West San Jacinto Groundwater Management Area – 2016 Annual Report (June 2017): This annual report contains detailed information on the history and progress of groundwater management and the groundwater monitoring program in the West San Jacinto area (including Perris and Moreno Valley). This report can be found on EMWD's website.

With respect to EMWD's ownership and use of reclaimed/recycled water, the California Water Code, Section 1210 states:

> "*The owner of a wastewater treatment plant operated for the purpose of treating wastes from a sanitary sewer system shall hold the exclusive right to the treated wastewater as against anyone who has supplied the water discharged into the wastewater collection and treatment system, including a person using water under a water service contract, unless otherwise provided by agreement.*"

With respect to the Water Use Efficiency Ordinance that will result in additional supplies through conservation:

- The County of Riverside Board of Supervisors approved an update to Ordinance Number 859 on October 20, 2009, requiring water efficient landscaping in any new development requiring a permit.
- EMWD's Administrative Code requires water efficient landscaping in new developments and water efficiency by all customers. The efficiency is enforced through allocation based tiered rates. EMWD's Administrative Code can be found on EMWD's website (www.emwd.org).

EMWD's Capital Improvement Plan

EMWD maintains and periodically updates a comprehensive Water Facilities Master Plan (WFMP). This working plan defines water supplies, transmission mains, and storage facilities required for the accommodation of projected growth within EMWD. On a yearly basis, a five-year Capital Improvement Plan (CIP) is prepared, which is based on a further refinement of the WFMP. The CIP outlines specific projects and their funding source. Each project is also submitted individually to the EMWD Board of Directors for authorization and approval. This allows EMWD to accurately match facility needs with development trends. Financing information for the desalter plant construction, expansion of the regional water reclamation facilities, and well replacement can also be found in the CIP.

Federal, State and Local Permits Needed for Construction

As part of EMWD's CIP, an Environment Review Committee (Committee) has been established. This Committee, made of representatives from the Engineering, Water Supply Planning, Groundwater Management and Facilities Planning, and Environmental and Regulatory Compliance Departments, discuss each project and the steps needed to comply with regulatory requirements. EMWD works with various government agencies, including the United States Department of Fish and Wildlife, the United States Army Corps of Engineers, the California Department of Public Health, the California Division of Drinking Water, the California State Water Resources Board, the California Air Quality management District, and the California Department of Fish and Game to obtain permits when necessary. The Engineering Department procures additional construction permits on a case-by-case basis. EMWD has already, or is in the process of, obtaining Environmental Impact Reports or other environmental documents necessary for desalter construction, expansion of regional water reclamation facilities, and well replacements. Any necessary permits secured by EMWD are kept on file at the District's headquarters facility.

Regulatory Approvals

The California Division of Drinking Water (DDW) has issued a system-wide permit for EMWD's water supply system. EMWD's Environmental and Regulatory Compliance Department conforms to specific regulations and obtains any additional necessary approvals. As new facilities are constructed by EMWD, they are subject to inspection and testing by regulatory agencies and the DPH permit is amended.

Demands

Demand Projections

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 below in **Table 4.17-4, *Retail Potable/Raw Customer Account Distribution,*** and **Table 4.17-5, *Retail Potable/Raw Water Deliveries by Customer Type (2005-2040)***.

Table 4.17-4
Retail Potable/Raw Customer Account Distribution

	Actual Accounts			Projected Accounts				
Use Type	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Single Family	114,100	129,400	136,200	154,300	173,600	193,200	212,000	230,500
Multi-Family	1,000	4,300	4,300	4,900	5,500	6,100	6,800	7,300
Commercial	1,500	2,100	2,600	3,000	3,300	3,700	4,100	4,400
Industrial	100	100	200	200	200	200	200	300
Institutional	40	500	500	600	700	800	900	900
Landscape[1]	1,500	2,200	2,800	2,200	2,200	2,200	2,200	2,100
Agriculture	200	100	700	700	700	700	700	700
Total	118,440	138,700	147,300	165,900	186,200	206,900	226,900	246,200

Source: *WSA*, February 21, 2018, p. 16.
Notes:
[1] Landscape accounts are projected to remain constant or decrease over time due to anticipated conversion to recycled water.

Table 4.17-5
Retail Potable/Raw Water Deliveries by Customer Type (2005-2040)

	Actual Deliveries			Projected Deliveries – AF[2]				
Use Type[1]	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Single Family	114,100	129,400	136,200	154,300	173,600	193,200	212,000	230,500
Multi-Family	1,000	4,300	4,300	4,900	5,500	6,100	6,800	7,300
Commercial	1,500	2,100	2,600	3,000	3,300	3,700	4,100	4,400
Industrial	100	100	200	200	200	200	200	300
Institutional	40	500	500	600	700	800	900	900
Landscape[3]	1,500	2,200	2,800	2,200	2,200	2,200	2,200	2,100
Agriculture	200	100	700	700	700	700	700	700
Total	118,440	138,700	147,300	165,900	186,200	206,900	226,900	246,200

Source: *WSA*, February 21, 2018, p. 17.
Notes:
[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 also provides wholesale water service to a number of sub-agencies, serves recycled water, and imports water for recharge purposes. These demands, along with system losses, are shown below in **Table 4.17-6, *Wholesale Deliveries to Other Agencies (2005 – 2040)*** and **Table 4.17-7, *Other Water Uses (2005 – 2040)***.

Total demands are shown on the following page in **Table 4.17-8, *Summary of System Water Demands (2005 – 2040)***.

Table 4.17-6
Wholesale Deliveries to Other Agencies (2005-2040)

	Actual Deliveries			Projected Deliveries – AF				
Agency	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
City of Hemet	100	0	0	0	0	0	0	0
City of Perris	1,900	1,700	1,500	1,800	1,900	2,000	2,100	2,200
City of San Jacinto	0	0	0	0	0	0	0	0
Lake Hemet MWD	100	1,300	4,300	4,700	5,100	5,500	5,900	6,300
Nuevo Water Co.	800	600	200	400	500	600	600	700
Murrieta Div. (WMWD)	100	1,600	700	2,500	3,900	5,200	6,500	7,900
Rho CA Water	26,300	21,900	15,000	33,600	35,200	36,900	38,600	40,200
HSJ Watermaster	0	0	0	7,500	7,500	7,500	7,500	7,500
Total	29,300	27,100	21,700	50,500	54,200	57,700	61,200	64,800

Source: *WSA*, February 21, 2018, p. 18.
Notes:
[1] Deliveries to Lake Hemet Municipal Water District may include non-potable supplies used to meet agricultural demand or may be in the form of recharge managed through the Hemet/San Jacinto Water Management Plan.
[2] Deliveries to the Hemet-San Jacinto Watermaster will support groundwater recharge activities under the Hemet/San Jacinto Water Management Plan.

Table 4.17-7
Other Water Uses (2005-2040)

	Actual Use - AF			Projected Use – AF				
Category	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Recycled Water[1,2]	32,600	28,200	46,100	46,900	53,100	55,200	57,400	58,900
Recharge Water[2]	7,000	0	0	0	0	0	0	0
Other/System Losses[3]	7,700	8,400	9,100	7,100	7,900	8,800	9,700	10,500
Total	47,300	36,600	55,200	54,000	61,000	64,000	67,100	69,400

Source: *WSA*, February 21, 2018, p. 18.
Notes:
[1] Recycled water projections include recycled water that is delivered to sub-agencies.
[2] Recycled water totals may include brackish groundwater used to supplement the recycled water system during high demand months.
[3] Total recharge water does not include water that is wholesaled to the Hemet=San Jacinto Watermaster for recharge purposes (totals are shown in Table 4.17-7.
[4] Included real and apparent losses for retail and wholesale system, unbilled, authorized consumption, etc.

Table 4.17-8
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

Source: *WSA*, February 21, 2018, p. 19.
Notes:
[1] Includes retail and wholesale recycled water demands.

Evaluation of Supply and Demand

Supply and Demand Evaluation under Historic Conditions

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 4.17-9, *Retail Normal Year Supply and Demand Comparison (AF)***, **Table 4.17-10, *Retail Single-Dry Year Supply and Demand Comparison***, and **Table 4.17-11, *Retail Multiple-Dry Years Supply and Demand Comparison (AF)***, are taken directly from the *2015 UWMP*. Similar estimates for EMWD's wholesale system are shown in **Table 4.17-12, *Wholesale Normal Year Supply and Demand Comparison (AF)***, **Table 4.17-13, *Wholesale Single-Dry Year Supply and Demand Comparison***, and **Table 4.17-14, *Wholesale Multiple-Dry Years Supply and Demand Comparison (AF)***. More details on this analysis can be found in Section 7.6 (Supply and Demand Assessment) of the *2015 UWMP*.

Table 4.17-9
Retail Normal Year Supply and Demand Comparison (AF)

	2020	2025	2030	2035	2040
Supply Totals	145,745	159,834	172,917	185,800	197,800
Demand Totals	145.745	159,834	172,917	185,800	197,800
Difference	**0**	**0**	**0**	**0**	**0**

Source: *WSA*, February 21, 2018, p. 20.

Table 4.17-10
Retail Single-Dry Year Supply and Demand Comparison (AF)

	2020	2025	2030	2035	2040
Supply Totals	166,300	182,400	197,400	212,000	225,700
Demand Totals	166.300	182,400	197,400	212,000	225,700
Difference	**0**	**0**	**0**	**0**	**0**

Source: *WSA*, February 21, 2018, p. 20.

Table 4.17-11
Retail Multiple-Dry Years Supply and Demand Comparison (AF)

		2020	2025	2030	2035	2040
First Year	Supply Totals	166,300	182,400	197,400	212,000	225,700
	Demand Totals	166.300	182,400	197,400	212,000	225,700
	Difference	**0**	**0**	**0**	**0**	**0**
Second Year	Supply Totals	142,500	155,400	167,400	179,000	190,100
	Demand Totals	142,500	155,400	167,400	179,000	190,100
	Difference	**0**	**0**	**0**	**0**	**0**
Third Year	Supply Totals	149,500	162,700	175,100	186,900	198,600
	Demand Totals	149,500	162,700	175,100	186,900	198,600
	Difference	**0**	**0**	**0**	**0**	**0**

Source: *WSA*, February 21, 2018, p. 21.

Table 4.17-12
Wholesale Normal Year Supply and Demand Comparison (AF)

	2020	2025	2030	2035	2040
Supply Totals	52,156	58,866	62,883	66,800	70,400
Demand Totals	52,156	58,866	62,883	66,800	70,400
Difference	**0**	**0**	**0**	**0**	**0**

Source: *WSA*, February 21, 2018, p. 21.

Table 4.17-13
Wholesale Single-Dry Year Supply and Demand Comparison (AF)

	2020	2025	2030	2035	2040
Supply Totals	58,500	66,200	70,700	75,200	79,300
Demand Totals	58,500	66,200	70,700	75,200	79,300
Difference	**0**	**0**	**0**	**0**	**0**

Source: *WSA*, February 21, 2018, p. 21.

Table 4.17-14
Wholesale Multiple-Dry Years Supply and Demand Comparison (AF)

		2020	2025	2030	2035	2040
First Year	Supply Totals	58,500	66,200	70,700	75,200	79,300
	Demand Totals	58.500	66,200	70,700	75,200	79,300
	Difference	**0**	**0**	**0**	**0**	**0**
Second Year	Supply Totals	48,500	54,700	58,200	61,700	64,900
	Demand Totals	48,500	54,700	58,200	61,700	64,900
	Difference	**0**	**0**	**0**	**0**	**0**
Third Year	Supply Totals	52,000	57,400	61,100	64,600	68,000
	Demand Totals	52,000	57,400	61,100	64,600	68,000
	Difference	**0**	**0**	**0**	**0**	**0**

Source: *WSA*, February 21, 2018, p. 22.

EMWD's *2015 UWMP* discusses the supply reliability for EMWD during dry years. It is anticipated that the majority of water for future development will 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.

Contingency Planning

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.

Effective as of the February 21, 2018 release of the *WSA*, EMWD was in Stage 2 of the WSCP in response to improved statewide water supply conditions and the declared end of the drought emergency.

4.17.2.2 Wastewater

Implementation of the proposed Project would require installation of a system to collect wastewater for treatment at a centralized system. Since EMWD is the regional wastewater collection and treatment agency for the Project area, the future onsite wastewater will be delivered to existing EMWD Wastewater Treatment Facilities located to the northwest of the Project site (Perris Valley Regional Water Reclamation Facility).

Wastewater will generally flow south toward a connection to a 27" vitrified clay pipe (VCP) located at Tres Lagos Drive, which will convey wastewater flows offsite to a processing station located approximately 5 miles west of the Project site.

For the purposes of transmission, treatment, and disposal of wastewater, the EMWD is divided into five sewer service areas: Hemet/San Jacinto, Moreno Valley, Sun City, Temecula Valley, and Perris Valley. Each service area is served by a single regional water reclamation facility (RWRF), for which methods of treatment vary. The facilities, linked through a network of 1,790 miles of pipeline and 46 active lift stations, are capable of treating 69 million gallons per day (MGD) of wastewater (currently treating 43 to 46 MGD) and serve an existing population of approximately 816,000 people (approx. 239,000 customer accounts).

The system also includes two (2) water filtration facilities (Henry J. Mills Filtration Plant; Robert A. Skinner Filtration Plant), two (2) desalination facilities (Menifee Desalter; Perris I Desalter; Perris II Desalter scheduled post 2020) and uses 100% of the treated wastewater for beneficial purposes.

EMWD is responsible for all wastewater collection and treatment in its service area. It has four operational regional water reclamation facilities (RWRF's) including 1) San Jacinto Valley RWRF, 2) Moreno Valley RWRF, 3) Temecula Valley RWRF, and 4) Perris Valley RWRF. The Sun City RWRF is inactive with all flows being diverted to the recently expanded (April 2014) Perris Valley RWRF.

Inter-connections between the local collection systems serving each treatment plant allow for operational flexibility, improved reliability, and expanded deliveries of recycled water. All of EMWD's RWRFs produce tertiary effluent, suitable for all Department of Health Services permitted uses, including irrigation of food crops and full body contact.

The four operational RWRFs have a combined wastewater treatment capacity of 81,800 acre-feet per year (AFY), and in 2015 collected a total of 48,665 acre-feet (AF) of wastewater, as summarized below in **Table 4.17-15, *Regional Water Reclamation Facilities (RWRF's) Treatment Capacity (AFY) and Volumes (AF)***.

Table 4.17-15
Regional Water Reclamation Facilities (RWRF's) Treatment Capacity (AFY) and Volumes (AF)

Facility[1]	2015 Treatment Capacity (AFY)	2015 Volumes				
		Wastewater (AF)				
		Collected[2] (AF)	Treated[2] (AF)	Treatment Level	Recycled (AF)[3,4,5] Within Service Area	Recycled (AF)[3,4,5] Outside Service Area
San Jacinto Valley	15,700	7,382	6,884	Tertiary	5,157	-0-
Moreno Valley	17,900	12,389	11,554	Tertiary	8,656	-0-
Temecula Valley	20,200	15,088	14,071	Tertiary	10,542	-0-
Sun City (Inactive)	--	--	--		--	--
Perris Valley	28,000	13,906	12,876	Tertiary	9,646	-0-
Total	**81,800**	**48,665**	**45,385**	Tertiary	**34,001**	**-0-**

Source: Chapter 6, System Supplies, Tables 6-7, 6-8 & 6-9, *2015 UWMP*, pp. 6-17 to 6-20.
Notes:
[1] All four of EMWD's RWRF's are connected through EMWD's regional recycled water system with one discharge point (Reach 4 Dissipater).
[2] Figures for "Collected" and "Treated" differ due to losses occurring during the treatment process.
[3] Because all four RWRF's are connected through one regional recycled water system, it is not possible to distinguish the volume of water recycled from each individual facility. Volumes recycled from each facility in the table were estimated based on the proportion of wastewater collected and treated at each plant compared to the total volume of wastewater treated.
[4] The balance between the total "Wastewater Treated" and the total volume "Recycled within Service Area" represents EMWD's system losses (such as storage pond evaporation and incidental recharge).
[5] Recycled water sold to RCWD and EVMWD is included in the total volume recycled within EMWD's service area and not reported separately in DWR Table 6-3 for wholesale. Recycled water deliveries to wholesale customers are distinguished from retail sales in DWR Table 6-4.

As indicated in **Table 4.17-15**, the combined four active RWRF's, on the whole, are operating at approximately 55% of capacity (45,385 AF Treated ÷ 81,800 AFY Capacity = ±55%). Individually, the RWRF's are operating at 44% to 70% of existing capacity levels (San Jacinto RWRF at 44%; Temecula Valley RWRF at 70%). It is noted, the TVRWRF is currently being expanded.

Alternatively, typical daily wastewater flows for the four active RWRF's relative to current and ultimate capacities during FY 2015/2016 are summarized below in **Table 4.17-16, *Regional Water Reclamation Facilities (RWRF's) Typical Daily Flows/Current Capacity/Ultimate Capacity – Million Gallons Per Day (MGD)***.

Table 4.17-16
Regional Water Reclamation Facilities (RWRF's) Typical Daily Flows/Current Capacity/Ultimate Capacity Million Gallons Per Day (MGD)

Facility	Level of Treatment	Typical Daily Flow (MGD)	Current Capacity (MGD)	Ultimate Capacity (MGD)
San Jacinto Valley	Tertiary	7	14	27
Moreno Valley	Tertiary	10.6[(1)]	16	41
Temecula Valley	Tertiary	14	18[(2)]	28
Sun City (Inactive)	--	--	--	--
Perris Valley	Tertiary	13.8	22	100
Total		**45.4**	**70**	**196**

Source: EMWD.org/services/wastewater-service/treatment-process (includes links to the individual RWRF's information summary factsheets, dated October 2016)

Notes:
1 10.6 MGD with the ability to divert about 2 MGD to the Perris Valley RWRF.
2 Current capacity at 18 MGD with Expansion Project Capacity of 23 MGD (expansion underway; to be completed 2020).

Sewer flows generated by the proposed Project will ultimately be treated and disposed of by EMWD's existing Perris Valley Regional Water Reclamation Facility (PVRWRF). Centrally located in the EMWD service area, the PVRWRF is the largest of the four operating plants. The plant produces tertiary-treated water and can store more than 2 billion gallons of recycled water for use by surrounding agricultural customers.

PVRWRF receives sewage from a 120-square-mile area surrounding Perris, Menifee, Romoland, Homeland, Winchester, and beyond. The facility is located on approximately 300 acres just west of Interstate-215, and south of Case Road.

In March 2014, EMWD completed the most recent expansion of the PVRWRF. With an ultimate capacity of 100 MGD, the facility is poised to meet the current and future demands of the region as well as help to meet the increasing demand for recycled water throughout EMWD's service area.

Before the expansion, its capacity was 14 MGD and typical daily flows were 13.8 MGD. The $180 million expansion took seven years to complete and is the largest capital improvement project in EMWD's 64-year history.

The most recent expansion allows EMWD to not only meet the projected demands of anticipated development in the region, but also to meet more stringent environmental requirements for wastewater treatment and recycled water quality.

4.17.2.3 Recycled Water

EMWD is widely viewed as an industry leader in recycled water and currently uses 100 percent of its recycled water supply for beneficial use within its 555-square mile service area. EMWD is

one of the largest by-volume recyclers in the nation and one of the few agencies that achieves 100 percent beneficial reuse, a strategic objective established by the EMWD Board of Directors.

EMWD currently treats approximately 43 to 46 MGD of wastewater (effluent) at its four active RWRFs. The District's goal is to reuse 100% of the water from the treatment plants and offer recycled water for sale to customers within the District's service area in order to reduce the reliance on MWD imported water supply and local groundwater supplies.

In 2017, approximately 46,431 AF or 100% of the total recycled water produced, was sold to customers. Furthermore, due to investment and expansion in the recycled water infrastructure, between 2005 and 2017 the amount of recycled water as a percentage of supply increased from 31% to 35%, and the percentage of imported water supply from MWD was subsequently reduced from 55% to 49%, as shown below in **Table 4.17-17, *Recycled Water as a Percentage of Total Water Supply 2005 and 2017***.

Table 4.17-17
Recycled Water as a Percentage of Total Water Supply 2005 and 2017

Water Supply Source	2005	2017
MWD (Imported Water)	55%	49%
Recycled Water	31%	35%
Local Groundwater	13%	11%
Desalinated Groundwater	1%	5%
Total Water Supply	**100% (140,469 AF)**	**100% (133,505 AF)**

Source: Introductory Section, Water Supply and Reliability, EMWD Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2017, p. 2.

EMWD began marketing recycled water to local farmers for irrigation of feed and fodder crops in 1966. In 1991, EMWD received funding through the United States Bureau of Reclamation to develop a recycled water backbone pipeline system, which greatly expanded its ability to deliver recycled water to a growing customer base. In the past decade, EMWD has received more than $10 million in Bureau of Reclamation Title XVI funding to further expand its recycled water distribution and storage infrastructure.

Recycled water plays an important role in EMWD's goal of developing a drought-proof and sustainable water supply. Currently, EMWD has the ability to store more than 2 billion gallons of recycled water, an amount equal to three to four months' worth of supply.

As of 2015, the EMWD Recycled Water System consisted of the four (4) active regional water reclamation facilities (RCWFs), ten (10) separate recycled water storage ponds in various locations (with a 2 billion gallon tertiary surface storage water capacity), eight (8) recycled water pump stations, five (5) recycled water tanks, and 219 miles of recycled water pipeline.

EMWD's recycled water production is currently delivered for use on agricultural crops,

recreational uses, golf courses, parks, schools, homeowners association landscaping, industrial facilities, public landscaping, and for environmental enhancement of wetland areas. It is noted, EMWDs recycled water program does not include use at a residential customer's home.

The majority of the recycled water sold is used for agricultural purposes but sales to municipal customers is increasing rapidly according to EMWD as expanding residential and urban development replaces irrigated farmland. Agricultural use of recycled water is projected to decrease as more agricultural land is converted to suburban residential use.

EMWD has invested nearly $200 million in infrastructure improvements on its recycled water system over the past twenty years with another $154 million anticipated to be invested in projects set to break ground over the next five years (between FY 2016/2017 and FY 2021/2022).

In July 2017, the District received $95.3 million in funding from the State Water Resources Control Board (State Board) to fund the Districts $120 million Recycled Water Supply Optimization Project, which includes the Trumble Road and Case Road projects, as well as the Temecula Valley RWRF Expansion Project summarized in **Table 4.17-18, *Temecula Valley RWRF Expansion Project***.

Table 4.17-18
Temecula Valley RWRF Expansion Project

Project	Date	Cost	Summary
Recycled Water Storage Pond Expansion and Optimization – Trumble Road & Case Road Project	March 2016	$14.1 M	In March 2016, construction started on the Recycled Water Storage Pond and Optimization project at Trumble Road and Case Road in Perris. This project will expand existing storage facilities at both the Trumble Road location (adjacent to the District's Main Office) and the Case Road location (at the Perris Valley RWRF. Construction at the Trumble Road site will add approximately 900 AF of storage to the existing 900 AF of storage bring the total storage at this facility to 1,800 AF. The Case Road Pond Recycled Water Pump Station will have a total capacity of 4,000 gallons per minute (GPM). Additional improvements include upgraded piping and mechanical and electrical systems to optimize future operations. The project will expand winter recycled water storage to meet summer peak demands. Total project cost is $14.1 million with a scheduled completion date of October 2017.
Temecula Valley RWRF (TVRWRF) Expansion Project	2016	$99.2 M	The TVRWRF Expansion Project began in 2016 and is scheduled for completion in 2020. The project will increase the wastewater treatment capacity by 5 MGD, from the existing 18 MGD to 23 MGD. The increased capacity is needed to accommodate growth in the region. The expansion includes new primary, secondary, tertiary, solids handling & effluent pumping facilities and storage. The $99.2 M cost is the largest single project expenditure in the 2016-2021 Capital Improvement Program (CIP).
Accelerated Retrofit Program	Start: Oct 2015; End: Oct 2016	$1.6 M	Program to convert facility-adjacent landscape irrigation sites from potable to recycled water. Participants were identified for the project based on a previous study that examined parks, schools, streetscapes and other high volume landscape users adjacent to existing recycled water infrastructure that had yet to be retrofitted and connected to the system, and sites that could be retrofitted without the need for extended pipelines, additional storage, or booster capacity. Six governmental & two private organizations participated including the Valley Wide Recreation & Park District, Menifee USD, City of Hemet, City of San Jacinto, Mt. San Jacinto College, the Oasis Community HOA, and the Menifee Valley Medical Center. In October 2016, within one year of project kickoff, the program was completed with over 400 AF converted from potable to recycled water. The project was authorized by the District Board for $2.2 million in funding but actually incurred only $1.6 million of costs of which $400,000 was funded by MWD.

Source: Eastern Municipal Water District Comprehensive Annual Financial Report pp. 11 & 12; EMWD Capital Improvement Program Update, Power Point Presentation, prepared by Joe Mouawad, P.E., dated November 9, 2016; *CIP Update.*

EMWD currently provides recycled water service to approximately 10,000 acres of agriculture throughout its service area. But with significant urban development anticipated in the coming decade, the District has initiated succession plans for its expected surplus of recycled water.

In addition to conditioning some new development to use recycled water on common-area and

public landscaping areas, EMWD is in the early stages of planning an Indirect Potable Reuse (IPR) project. This would include advanced treatment after the reclamation process, followed by groundwater recharge of the advanced treated recycled water. That water would be used to recharge local groundwater basins and eventually extracted for drinking water purposes, creating a sustainable and locally-sourced water supply for the region.

If available, the Project may incorporate recycled water for landscape irrigation, which helps reduce strain on environmental resources. The Project may use recycled water for irrigation of common area landscaping, open space, parkways, and roadside landscaping adjacent to public roads.

Recycled water is available through EMWD via an application process. An existing recycled water line is located in Leon Road (western boundary of the Residential Project site Components). This recycled water infrastructure is controlled by EMWD. If feasible, an application process would be initiated with EMWD to incorporate recycled water infrastructure into the project design. This process would occur after the approval of the Project and be completed prior to final map approval.

To provide recycled water, EMWD will require proof of permits through Regional Board and CDPH, as appropriate, from the entity responsible for the landscape maintenance and irrigation where the water is used (e.g., park district, transportation department, owner's association).

4.18.2.1 Electricity: Environmental Setting

Southern California Edison Company (SCE) is the primary distribution provider for electricity in the project area. SCE provides service to customers within a 50,000 square mile area of central, coastal, and southern California, including Riverside County. SCE is upgrading and expanding its electricity-distribution network of more than the 700 substations, 104,000 miles of circuits, and 1.5 million poles that provide electricity to nearly 14 million Californians. SCE electricity transmission lines connect Riverside County with power sources from Northern California, Arizona, and southern California. A transmission corridor traverses east to west through Riverside County and serves the SCE Valley Substation located at the intersection of Menifee Road and Highway 74.

SCE derives its electricity from a variety of sources, which have changed considerably in recent years due to the recent closure of the San Onofre Nuclear Plant and increasingly ambitious California Renewable Standards. The California Public Utilities Commission reports that 21.6% of SCE's 2013 retail electricity sales were generated by renewable power. The SCE power mix in 2013 (the most recent data year available) was 22% eligible renewable, 6% coal, 4% large hydroelectric, 28% natural gas, 6% nuclear and 34% unspecified sources of power. "Unspecified sources of power" refers to electricity from transactions that are not traceable to specific generation sources. A September 4, 2014 SCE press release stated that SCE anticipates its 2014 Power Content Label will show minimal or no coal-generated electricity because SCE sold its remaining coal generation ownership shares at the end of 2013.

According to the California Energy Commission, the summer of 2012 was expected to have more than adequate electricity supplies to meet peak demand even if hotter than average temperatures occurred. Planning Reserves for hotter than normal (1 in 10 year peak conditions) were estimated to range from 21-34%.

4.18.2.2 Natural Gas: Environmental Setting

Southern California Gas Company (SCGC or SoCalGas) is a gas-only utility that serves residential, commercial, and industrial customers and provides gas for enhanced oil recovery and electricity production. SoCalGas serves 12 counties: Fresno, Imperial, Kern, King, Los Angeles, Orange, Santa Barbara, San Bernardino, San Luis Obispo, Tulare, Ventura, and Riverside. Natural gas is a "fossil fuel," indicating that it comes from the ground, similar to other hydrocarbons such as coal or oil. SCGC purchases natural gas from several bordering states. Interstate pipelines serve California. Most of the major natural gas transmission pipelines in the County of Riverside are owned and operated by SoCalGas. The Public Utilities Commission regulates SoCalGas, who is the default provider required by law, for natural gas delivery to the County. SoCalGas has capacity and resources to deliver gas except in certain situations that are noted in State law. As development occurs, SoCalGas will continue to extend its services to accommodate development and supply necessary gas lines. SoCalGas is continuously expanding its network of gas pipelines to meet the needs of new commercial and residential developments in Southern California.

Review of the National Pipeline Mapping System (NPMS) public viewer website for gas transmission pipelines and hazardous liquid trunk lines on or close to the Project site found that the closest pipeline to the Project site is a natural gas pipeline (currently in service) located in Briggs Road. According to the NPMS website, the pipeline is operated by SoCalGas.

4.17.2.4 Related Regulations

4.17.2.4.a Federal

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The Clean Water Act was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial stormwater discharges. In November 1990, the U.S. Environmental Protection Agency published final regulations that establish application requirements for specific categories of industries, including construction Projects that encompass greater than or equal to five acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to one acre.

The regulations require that stormwater and non-stormwater runoff associated with construction activity, which discharges either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4s), must be regulated by an NPDES permit.

4.17.2.4.b State

California Water Quality Laws

Under California law, the State Board and nine Regional Water Quality Control Boards (RWQCB) are responsible for implementing the Federal Clean Water Act (CWA) and the California Porter-Cologne Water Quality Control Act (Porter- Cologne Act). The Porter-Cologne Act, California Water Code section 13000 et seq., directs each RWQCB to develop a Water Quality Control Plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory programs. The proposed project is located within the purview of the Santa Ana RWQCB (Region 8) and must comply with applicable elements of the region's Basin Plan, as well as other requirements of the Porter- Cologne Act.

AB 1881 – Model Water Efficient Landscape Ordinance 2006

Assembly Bill (AB) 1881, the Water Conservation in Landscaping Act was passed by the California legislature in 2006. AB 1881 requires the California Department of Water Resources (DWR) to update the California Model Landscape Ordinance established through AB 325 in accordance with specified requirements, reflecting many of the recommendations from the AB 2717 Task Force.

Under AB 1881, local agencies were required to adopt the updated Model Ordinance (or a stricter local landscape ordinance) by 1/1/2010. The Model Ordinance establishes a formal structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects and establishes provisions for water management practices and water waste prevention on existing landscapes.

20x2020 Water Conservation Plan (SBx7-7)

The 20x2020 Water Conservation Plan, issued by the DWR in 2010 pursuant to the Water Conservation Act of 2009 (SBX7-7), established a water conservation target of 20 percent reduction in water use by 2020 compared to 2005 baseline use.

Recycled Water Policy

The Recycled Water Policy issued by the SRWCB in 2009 requires increased use of recycled water by 200,000 afy by 2020 and by 300,000 afy by 2030. The policy further contains the goals of increasing recycled water use statewide by at least 1,000,000 afy by 2020, and at least 2,000,000 afy by 2030, over 2002 levels. The policy states:

> *...Pursuant to Water Code sections 13550 et seq., it is a waste and unreasonable use of water for water agencies not to use recycled water when recycled water of adequate quality is available and is not being put to beneficial use, subject to the conditions established in sections 13550 et seq. The State Water Board shall exercise its authority pursuant to Water Code section 275 to the fullest extent possible to enforce the mandates of this subparagraph. (SWRCB 2009)*

4.17.2.4.c Local

Eastern Municipal Water District

EMWD has created Water Efficient Guidelines for New Development (July 19, 2013). The focus of the Water Efficiency Guidelines is on incentive-driven, cost-effective, voluntary water efficiency measures for new residential development. The Water Efficiency Guidelines are divided into two primary sections – (1) indoor guidelines; and (2) outdoor guidelines.

1. Indoor guidelines – designed primarily for builders, developers, and those involved in the design and construction of residential housing who make decisions about what appliance and fixtures are installed. The indoor guidelines are also applicable to existing residents who may be seeking to improve water efficiency in their home or apartment.
2. Outdoor guidelines – designed primarily for residents, landscape architects and designers, builders, and others who make decisions about creating landscapes in new residences. The outdoor guidelines are also applicable to existing residents seeking to re-develop their landscape.

EMWD's conservation programs encourage existing and future customers to make water efficiency a way of life through installation of efficient fixtures and appliances, water budgets to help manage outdoor irrigation, and water use efficiency regulations.

Indoor Guidelines

EMWD currently sets indoor water budgets based on water use estimated at 60 gallons per capita per day (GPCD). Homes built to meet the current California Green Building Standards Code (CALGreen) specification are expected to have water demands as low as 35.0 GPCD for a household of 3 people. Homes that include the efficiency recommendations in Water Efficiency Guidelines are expected to have water demands of only 31 GPCD. Compared with the current EMWD water budget allocation of 60 GPCD, new homes may use substantially less water indoors. The following are taken from the Water Efficiency Guidelines and will apply to the Project:

- Toilets – 1.0 Gallons per Flush (GPF) or better, WaterSense labeled toilet or better.
- Clothes Washer – High Efficiency: Install an ENERGY STAR rated clothes washer with an average volume allowance of 15 gallons per load or less.
- Showers and Showerheads: Install 1.5 - 1.75 GPM maximum flow rate showerhead at 80 PSI.
- Bathroom Faucets: Install 0.5 GPM maximum flow aerators in all lavatory/bathroom sink.
- Leak Detection: Detect Leaks Using the Existing Water Meter.

Outdoor Guidelines

Indoor water use largely takes place while we are present and aware that it's happening. Outdoor use is far less intuitive and is often controlled by automatic timers that operate when no one is present. There are three sets of outdoor water use regulations to consider:

1. The Water Budget Rate Structure of EMWD, which sets the maximum water budget for new landscapes at 70% of evapotranspiration (ETo). The rate structure applies to all of EMWD new residential and landscape only customers and provides a strong economic incentive to stay within the water budget.
2. The California Model Efficient Landscape Ordinance (MELO), which sets out detailed requirements for planning, design, and installation of new or renovated landscapes.
3. The California Green Building Standards Code (CALGreen), which sets out some voluntary (or mandatory depending on the locality) goals for additional water savings in new construction.

For practical purposes the MELO is the governing document for new and rehabilitated landscapes in the EMWD service area, as all of the communities in the area that have adopted it, or an equivalent ordinance, into their regulations. MELO complies with the EMWD water budget rate structure in that both regulations are based on a maximum applied water allowance (MAWA) of no more than 70% of ETo. CALGreen standards however go beyond MELO using the concept of lower water allowances, and in suggesting the use of dedicated landscape water meters. EMWD encourages new and rehabilitated landscapes to go beyond the 70% requirements and to consider landscapes at 60% or even 50% of ETo.

County of Riverside Ordinance No. 859

It is the intent of Ordinance No. 859 to:

1. Establish provisions for water management practices and water waste prevention;
2. Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new and rehabilitated projects;
3. To reduce the water demands from landscapes without a decline in landscape quality or quantity;
4. To retain flexibility and encourage creativity through appropriate design;
5. To assure the attainment of water efficient landscape goals by requiring that landscapes serviced by potable water not exceed a maximum water demand of fifty percent (50%) or 0.50 of its reference evapotranspiration (ETo);
6. To assure the attainment of water efficient landscape goals by requiring that landscapes serviced entirely by recycled water not exceed a maximum water demand of seventy percent (70%) or 0.70 of its reference evapotranspiration (ETo);
7. To eliminate water waste from overspray and/or runoff;
8. To achieve water conservation by raising the public awareness of the need to conserve water through education and motivation to embrace an effective water demand management program;
9. To implement the requirements of the California Water Conservation in Landscaping Act

2006 and the California Code of Regulations Title 23, Division 2, Chapter 2.7;
10. To promote water conservation within new residential subdivision landscapes by prohibiting the use of natural turfgrass lawns within the front yards of new homes and promoting low water use plants and inert materials for a sustainable and marketable landscape design; and
11. To prohibit the new installation of natural turfgrass within medians and parkways within and along County Maintained Roads.

The Project will be required to comply with shall be required to comply with the EMWD Water Efficient Guidelines for New Development and Riverside County Ordinance No. 859, which are in effect at the time of building permit issuance. This is reflected in **Standard Condition SC-USS-1** (see Section 4.17.5).

County of General Plan Goals and Policies

The following are applicable policies from the County of Riverside General Plan related to utilities and service systems:

Water and Sewer

- **Policy OS 1.1** Balance consideration of water supply requirements among urban, agricultural, and environmental needs so that sufficient supply is available to meet each of these different needs.
- **Policy OS 2.1** Encourage the installation and use of water conserving systems such as dry wells and graywater systems, where feasible, in new developments. The installation of cisterns or infiltrators shall be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms.
- **Policy OS 2.3** Encourage the use of native, drought-resistant landscaping planting.
- **Policy OS 2.4** Support and engage in educational outreach programs with other agencies that promote water conservation and widespread use of water-saving technologies.
- **Policy LU 5.3** Review all projects for consistency with individual urban water management plans.
- **Policy LU 17.2** Require that adequate and available water resources exist to meet the demands of the proposed land use.

Energy

- **Policy LU 5.2** Monitor the capabilities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of services.

Energy Conservation and Alternatives

- **Policy OS 11.1** Enforce the state Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.
- **Policy OS 11.2** Support and encourage voluntary efforts to provide active and passive sola

access opportunities in new developments.

- **Policy OS 11.3** Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.
- **Policy OS 16.1** Continue to implement Title 24 of the State Building Code. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of Title 24.
- **Policy OS 16.3** Implement public transportation systems that utilize alternative fuels when possible, as well as associated urban design measures that support alternatives to private automobile use.
- **Policy OS 16.9** Encourage increased use of passive, solar design and day lighting in existing and new structures.

4.17.3 Thresholds of Significance

As discussed in Section 4.17.1, the Project impacts to six (6) criteria pertaining to utilities and service systems will be analyzed. The Project would have a significant impact if it would:

46. Water.

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would 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?

47. Sewer.

a. Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?
b. Result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

49. Utilities.

Would the Project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?

a. Electricity?
b. Natural gas?

The question posed in the IS is included for each topical section to guide the impact analysis and the above significance criterion represent a summary of the thresholds raised in the IS. The potential utilities and service systems changes in the environment are addressed in response to the above threshold in the following analysis.

4.17.4 Potential Impacts

THRESHOLD 46.a: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects?

Less Than Significant Impact

A residential daily water usage rate of 265 gallons per day (gpd) was utilized for this Project. This results in a residential Project total water usage of 152,100 gpd (574 units x 265 gpd). Potable water is provided to the Project site by EMWD. The proposed Project will tie into an existing 48" EMWD water line in Leon Road and an existing 30" EMWD water line in Craig Avenue. Water infrastructure facilities that are located within public rights-of-way shall be maintained by EMWD. Once connections to EMWD are made, 8" PVC pipes will convey water into the Project. Water lines will be placed underneath each internal private street in accordance with EMWD design standards.

According to the *WSA*, EMWD has determined that it will be able to provide adequate water supplies to meet the potable water demand for the Project as part of its existing and future demands.

According to the Will Serve letter, EMWD is willing to provide water service to the Project. The provision of service is contingent upon the necessary arrangements in accordance with EMWD rules and regulation. Further arrangements for service from EMWD may also include plan check, facility construction, inspection, jurisdictional annexation and payment of financial participation fees.

EMWD relies on MWD's *2015 RUWMP* to evaluate the reliability of imported supplies and the amount of imported water which will be available in EMWD's service area during normal (aka "average"), single dry, and multiple dry water year periods. MWD's *2015 RUWMP* detailed its planning initiatives and based on these efforts concluded that with the storage and transfer programs developed, MWD has sufficient supply capabilities to meet the expected demands of its member agencies from 2020 through 2040 under normal, historic single-dry and historic multiple dry year conditions.

Based on this, EMWD will have sufficient supplies to meet both retail and wholesale demands from 2020 to 2040 under average year conditions, as shown in **Table 4.17-9, *Retail Normal Year Supply and Demand Comparison (AF)***. In addition, despite an increase in demands, EMWD will have sufficient supplies to meet both retail and wholesale demands from 2020 to 2040 under single-dry year conditions, as shown in **Table 4.17-10, *Retail Single-Dry Year Supply and Demand Comparison***. Lastly, EMWD will have sufficient supplies to meet both retail and wholesale demands from 2020 to 2040 under multiple-dry year conditions, as shown in **Table 4.17-11, *Retail Multiple-Dry Years Supply and Demand Comparison (AF)***. Any impacts from the Project will be incremental.

The Project will be required to comply with the EMWD Water Efficient Guidelines for New Development and County Ordinance No. 859 (Water Efficient Landscape Requirements Ordinance), which are in effect at the time of building permit issuance. This is reflected in **Standard Condition SC-USS-1**, as outlined in Section 4.17.5.

See Section 4.17.2.4.c for descriptions of EMWD Water Efficiency Guidelines and County Ordinance No. 859.

In addition, the proposed Project will be subject to water connection fees. The purposes of these fees are pay for existing and future water facilities/capacity. **Standard Condition SC-USS-3**, as outlined in Section 4.17.5, shall be implemented to address these fees.

Due to the sufficient supply, and incorporation of **Standard Condition SC-USS-3**, any impacts to water facilities are considered less than significant.

If available, the Project may incorporate recycled water for landscape irrigation, which helps reduce strain on environmental resources. The Project may use recycled water for irrigation of common area landscaping, open space, parkways, and roadside landscaping adjacent to public roads.

If recycled water infrastructure is available, the Project may opt to incorporate this utility to augment landscape irrigation. Recycled water is available through EMWD via an application process. If feasible, an application process would be initiated with EMWD to incorporate recycled water infrastructure into the project design. This process would occur after the approval of the Project and be completed prior to final map approval.

Storm water drainage systems are discussed extensively in Subchapter 4.10, Hydrology and Water Quality, of this DEIR. Consistent with the discussion in Thresholds 24.a, and 24.b, in Subchapter 4.10, potentially significant impacts could occur if development of the project results in runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. With site design features which incorporate measures to control surface runoff, and the incorporation of **Standard Conditions SC-HYD-1** through **SC-HYD-4**, Project's potential impacts to hydrology and water quality resources (which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff) would remain less than significant.

Based on this information, the Project will not require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects. Any impacts will be less than significant.

THRESHOLD 46.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

Please reference the discussion in Threshold 46.a, above. Based on the information contained in the WSA, EMWD has determined that it will be able to provide adequate water supplies to meet the potable water demand for the Project as part of its existing and future demands. Therefore, the Project sufficient water supplies are available to serve the Project from existing entitlements and resources. Impacts will be less than significant.

THRESHOLD 47.a: Would the Project require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?

Less Than Significant Impact

EMWD is responsible for all wastewater collection and treatment in its service area. It has four operational RWRF's including 1) San Jacinto Valley RWRF, 2) Moreno Valley RWRF, 3) Temecula Valley RWRF, and 4) Perris Valley RWRF. The Sun City RWRF is inactive with all flows being diverted to the recently expanded (April 2014) Perris Valley RWRF.

The four operational RWRFs have a combined wastewater treatment capacity of 81,800 AFY, and in 2015 collected a total of 48,665 AF of wastewater, as summarized above in **Table 4.17-15, *Regional Water Reclamation Facilities (RWRF's) Treatment Capacity (AFY) and Volumes (AF)***. Therefore, the combined four active RWRF's, on the whole, are operating at approximately 59.5% of capacity (48,665 AF Treated ÷ 81,800 AFY Capacity = ±55%).

All wastewater generated by the interior plumbing system of the proposed Project will be discharged into the local sewer system and conveyed for treatment at the Perris Valley RWRF. Wastewater flows will consist of typical residential wastewater discharges and will not require new methods or equipment for treatment that are not currently permitted for the facility. Connections to local sewer mains will involve temporary and less than significant construction impacts that will occur in conjunction with other on-site improvements. It should be noted that no septic systems are proposed.

The most recent expansion allows EMWD to not only meet the projected demands of anticipated development in the region, but also to meet more stringent environmental requirements for wastewater treatment and recycled water quality.

As discussed in Subchapter 4.10, Hydrology and Water Quality, all wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant. **Standard Condition SC-HYD-4**, as outlined in Section 4.17.5, is required in order to ensure that the Project's potential impacts to water quality resources (waste discharge requirements) would remain less than significant. **Standard Condition SC-HYD-4** is not considered unique mitigation under CEQA.

The proposed Project will be subject to sewer connection fees. The purpose of these fees is to pay for existing and future sewer capacity. **Standard Condition SC-USS-3**, as outlined in Subsection 4.17.5, shall be implemented to address these fees. **Standard Condition SC-USS-3** is not considered unique mitigation under CEQA.

In addition, according to the Will Serve letter, EMWD is willing to provide sewer service to the Project. The provision of service is contingent upon the necessary arrangements in accordance with EMWD rules and regulation. Further arrangements for service from EMWD may also include plan check, facility construction, inspection, jurisdictional annexation and payment of financial participation fees.

Based on the scope of the Project, any impacts will be incremental. It is projected that the Project will add an increment of 57,400 mgd of wastewater (based on 100 mgd/household). However, given the existing capacity within the EMWD facilities, Project design, and adherence to **Standard Condition SC-HYD-4** (see Section 4.10.5), and **Standard Condition SC-USS-3** (see Section 4.17.5), any impacts will be less than significant.

THRESHOLD 47.b: 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

Please reference the discussion in Threshold 47.a. The Project will add an increment of approximately 57,400 mgd of wastewater (based on 100 mgd/day/household). However, given the existing capacity within the EMWD facilities, Project design, and adherence to **Standard Condition SC-HYD-4**, and **Standard Condition SC-USS-3**, any impacts are considered less than significant.

THRESHOLD 49.a: Would the Project require or result in the construction of electricity facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant with Mitigation Incorporated

It is anticipated that electrical power for the proposed Project would be provided by the existing lines in Leon Road or Holland Road. The existing power lines adjacent to the Project site would be undergrounded as part of the proposed Project as long as they are confirmed to be less than 34 KV. All new distribution lines will be constructed as underground facilities concurrently with project development by phase. Thus, construction impacts of new electrical facilities needed on site are included in the analyses of Project-related construction impacts throughout the Draft EIR. Impacts to the surrounding environment from the construction of onsite electrical facilities and offsite components that will be installed as part of the Project are considered to be less than significant.

It is possible that interruption of existing power service could cause a significant adverse impact if overhead lines are not relocated temporarily while undergrounding is taking place. The implementation of **Standard Condition SC-USS-4** (see Section 4.17.5) will ensure that all electrical service remains available to existing users while new and replacement lines are under construction and will reduce potential temporary impacts to less than significant levels. **Standard Condition SC-USS-5**, and **Standard Condition SC-USS-6** (see Section 4.17.5) will ensure that all lines are underground (other than transmission lines) and will reduce these potential temporary impacts to less than significant levels.

The proposed Project will generate additional demand for electricity. Peak demand will generally happen during the summer months. Based on data projections provided by SCE, each of the proposed 574 residential units estimated daily demand for electricity is forecast to be about 2,000 kw averaged over the year. To further reduce electricity demand mitigation measures are provided below to reduce overall energy consumption. **Mitigation Measure MM-GHG-1** (see Section 4.17.5) has been identified in Subchapter 4.4, Air Quality and Subchapter 4.8, Greenhouse Gas Emissions, respectively, of this DEIR, and will reduce the energy demand of the proposed Project. In addition, **Mitigation Measure MM-GHG-1** is designed to increase the water and energy efficiency of the buildings such that the per capita electrical demand of the residences would be substantially lower than in conventionally built homes.

The Project would increase use of electricity within SCE's service area, particularly the demand for electricity to light, heat, and air condition the residential development. SCE currently is in the process of upgrading the electrical infrastructure that serves the greater Project area. The infrastructure project is designed to provide sufficient electrical capacity and reliability for existing and planned development in the area. SCE is aware that there are currently planned, or in process, additional developments in the Project area which will require power. As development of the Project and/or surrounding developments occurs, even more circuits may be necessary.

Overall electrical consumption will increase as a result of the proposed Project and cumulative development in the general vicinity. SCE has established that additional transmission capacity will be necessary to provide the power and power grid necessary to support future growth in the Project vicinity. SCE is expanding transmission capacity in the general Project area, and the potential impacts associated with construction of transmission facilities has been or will be evaluated under CEQA by SCE. Due to the preliminary stage of review of the proposed Project, the proponent has not sought or obtained a will serve letter from SCE at this time.

Based on the information provided above, sufficient power and distribution capabilities exist or are expected to exist to provide the proposed Project with adequate electrical service.

THRESHOLD 49.b: Would the Project require or result in the construction of natural gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant

According to the 2006 California Gas Report, residential and wholesale gas requirements are expected to increase by approximately nine percent between 2006 and 2025 as population in SoCalGas service area continues to grow. Commercial markets are expected to show modest customer gains, but these projections were based on a continuously growing economy and did not project the recession that occurred during the analyzed time frame. Over the past three years, California natural gas utilities, interstate pipelines, and instate natural gas storage facilities have had an increase in demand. More projects have been proposed and some are currently under construction to add additional pipelines, expand existing pipelines, add new facilities, or to upgrade. SoCalGas has aggressively implemented energy efficiency goals and associated programs to reduce the anticipated increase in demand for natural gas. They are projected to reduce this demand 19% by 2025. Energy saving programs such as stricter building and appliance standards and energy efficiency programs are expected to help reduce the demand on natural gas.

SoCalGas' marketing division lists an approximate residential customer base of 5,526,000 units. The 574 new residential units proposed by the project would constitute approximately 0.00010 percent of the residential customer base in 2004. The residential base has increased in the last ten years, so the Project would actually constitute an even smaller percentage. The proposed Project has not sought or received a will serve letter from SCGC at this time.

New gas main extensions will be required to serve the proposed Project. All new distribution lines will be constructed concurrently with Project development by phase. Thus, construction of new and replacement gas lines needed on site is addressed in the analyses of construction impacts throughout the DEIR. Therefore, impacts to the surrounding environment from the construction of on-site natural gas facilities are considered to be less than significant.

Since no natural gas is presently utilized onsite, there will be no interruption of existing gas service to the Project site. However, some interruption could occur offsite. This could be a significant adverse impact if existing lines do not remain operable while replacement lines are being constructed or connected to the adjacent gas mains. The implementation of **Standard Condition SC-USS-7** (see Section 4.17.5) will ensure that all gas service remains available to existing users while new and replacement lines are under construction and reduce these potential temporary impacts to less than significant levels.

4.17.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Conditions

Standard Conditions SC-HYD-1 through **SC-HYD-4** pertain to hydrology and water quality:

SC-HYD-1 **Site Drainage Plan. A site drainage plan is required by the County of Riverside and will be reviewed by the Building and Safety Department. The final grading and drainage plan will be approved by the Building and Safety Department during plan check review.**

SC-HYD-2 **The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.**

SC-HYD-3 **The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.**

SC-HYD-4 **Wastewater. All wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant.**

Standard Condition SC-PS-1 pertains to maintenance of public facilities, including roads and other governmental services.

SC-PS-1 **Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.**

Standard Conditions SC-USS-1 through **SC-USS-3** pertain to water and sewer.

SC-USS-1 **The Project will be required to comply with the EMWD Water Efficient Guidelines for New Development, and County Ordinance No. 859, which are in effect at the time of building permit issuance.**

SC-USS-2 Sewer Connection Fees. Prior to the issuance of a certificate of occupancy, the Project applicant shall pay the applicable sewer connection fees to EMWD.

SC-USS-3 Water Connection Fees. Prior to the issuance of a certificate of occupancy, the Project applicant shall pay the applicable water connection fees to EMWD.

Standard Conditions SC-USS-4 through **SC-USS-6** pertain to electricity. **Standard Condition SC-USS-7** pertains to gas.

SC-USS-4 Prior to recordation of a final map by the County, the project applicant shall construct, or enter into an agreement and post security, in a form and amount acceptable to the Building and Safety Department, guaranteeing the undergrounding of proposed utility distribution lines in conformance with applicable County standards and the County's Capital Improvement Policy.

SC-USS-5 The Tentative Tract map shall be conditioned to require that all electrical service lines (excluding transmission lines) serving development within the project will be installed underground. This includes existing service facilities that may have to be relocated temporarily during grading.

SC-USS-6 The contractor shall temporarily relocate existing overhead facilities, as necessary to maintain service, while grading and installing the new underground system is under- way.

SC-USS7 Gas service shall remain available to all existing customers during construction of new and replacement gas lines within the project site. This shall be accomplished by requiring installers to submit construction installation plans for gas lines to the County demonstrating that such lines will be available at all times, except for short- term (a few hours) cut over connections.

Mitigation Measure(s)

Mitigation Measure MM-GHG-1 pertains to energy-saving features and operational programs.

MM-GHG-1 Prior to issuance of each building permit, the Project Applicant shall provide documentation to the County of Riverside Building Department demonstrating that the improvements and/or buildings subject to each building permit application include the following measures from the County of Riverside Climate Action Plan (November 2019) Greenhouse Gas Emissions Screening Tables (Appendix F to the Climate Action Plan), as needed to achieve the required 100 points. Alternatively, the specific

measures may be substituted for other measures, so long as 100 points are still achieved on the checklist subject to County of Riverside Building Department review:

1. **Measure EE5.A.1 Insulation - Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) (9 points)**
2. **Measure EE5.A.2 Windows - Enhanced Window (0.32 U-factor, 0.25 SHGC) (4 points)**
3. **Measure EE5.A.3 Cool Roofs - Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) (7 points)**
4. **Measure EE5.A.4 Air Infiltration - Blower Door HERS Verified Envelope Leakage or equivalent (5 points)**
5. **Measure EE5.B.1 Heating/Cooling Distribution System - Modest Duct Insulation (R-6) (4 points)**
6. **Measure EE5.B.2 Space Heating/Cooling Equipment - Very High Efficiency HVAC (SEER 16/82% AFUE or 9 HSPF) (5 points)**
7. **Measure EE5.B.3 Water Heaters - Very High Efficiency Water Heater (0.92 Energy Factor) (11 points)**
8. **Measure EE5.B.5 Artificial Lighting - High Efficiency Lights (50% of in-unit fixtures are high efficiency) (6 points)**
9. **Measure EE5.B.6 Appliances - Energy Star Refrigerator (new) Energy Star Dishwasher (new) Energy Star Washing Machine (new) (3 points)**
10. **Measure CE1.A.1 Photovoltaic - 50 percent of the power needs of the Project (17 points)**
11. **Measure W2.A.2 Water Efficient Landscaping - Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use) (2 points)**
12. **Measure W2.B.1 Showers - Water Efficient Showerheads (2.0 gpm) (2 points)**
13. **Measure W2.B.2 Toilets - Water Efficient Toilets (1.5 gpm) (2 points)**
14. **Measure W2.B.3 Faucets - Water Efficient faucets (1.28 gpm) (2 points)**
15. **Measure W2.B.4 Dishwasher - Water Efficient Dishwasher (6 gallons per cycle or less) (1 points)**
16. **Measure W2.B.5 Washing Machine - Water Efficient Washing Machine (Water factor <5.5) (1 points)**
17. **Measure W2.B.6 WaterSense - EPA WaterSense Certification (7 points)**
18. **Measure T4.A.1 Electric Vehicle Recharging - Install electric vehicle charging stations for each residential unit included in the Project. Projects that include charging stations for fewer than all units shall receive points on a proportional basis. (8 points)**
19. **Measure S1.A.1 Recycling - Provide green waste composting bins at each residential unit (4 points)**

4.17.6 Cumulative Impacts

According to EMWD, there is an adequate water supply and sewer capacity, respectively, to

meet the demand of the Project(s). Based on the analysis above, and in the referenced documentation, water and wastewater management systems are capable of meeting the cumulative demand for these systems. With adherence **Standard Conditions SC-USS-1** through **SC-USS-4** and **SC-HYD-4**, impacts are considered less than significant. Thus, the Project will not cause cumulatively considerable significant adverse impacts on these systems. With implementation of the proposed stormwater management design, as outlined in **Standard Conditions SC-HYD-1** through **SC-HYD-3**, future stormwater runoff after development of the Project site will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and is not forecast to make a cumulatively considerable contribution to downstream flood hazards in the Santa Ana River Watershed.

As discussed in the IS, cumulative impacts to landfill capacity will be less than significant due to the Project construction debris and operational waste representing a less than substantial cumulative increment. In addition, with adherence to **Standard Condition SC-PS-1**, for the maintenance of public facilities, including roads and other governmental services, any impacts will be less than significant and will not result in a significant cumulative impact.

Development proposed at the Project site would result in a permanent and continued use of electricity and natural gas resources. Sufficient power and distribution capabilities exist to provide electrical services to the proposed Project, but additional transmission capacity will be necessary to provide power to support the current and future cumulative growth in the vicinity. The proposed Project would contribute to the cumulative need for electricity the Project's cumulative contribution to impacts on the area electricity grid is considered to be less than significant.

As stated in the 2006 California Gas Report, SoCalGas projects that contribute to cumulative gas demand for residential meters will increase at an average annual rate of 1.3 percent from 2006 to 2025. When all market sectors are taken into account, average annual demand for natural gas is projected to occur at a rate of 0.15 percent over the same time period. For residential customers, use per meter is forecasted to decline due to the expected energy savings from higher building and appliance standards and energy efficiency programs**,** such as those required in the Project.

However, demand will be influenced by growth. By 2025, residential demand is expected to reach 279 Billion cubic feet (Bcf), an increase of 25 Bcf from 2005. Commercial and industrial market segments are also projected to decrease due to the California Public Utilities Commission authorized energy efficiency programs. Since the Project would: constitute only approximately 0.00010 percent of the residential customer base in 2004 and the proposed Project has been required to install Energy Star-rated models of appliances and would be served by existing and planned service and transmission lines within and around the project area, this Project's cumulative energy demand impacts are concluded to a less than significant impact.

To further reduce electricity demand, mitigation measures are provided to reduce overall energy

consumption. **Mitigation Measure MM-GHG-1** will reduce the energy demand of the proposed Project. In addition, **Mitigation Measure MM-GHG-1** is designed to increase the water and energy efficiency of the buildings such that the per capita electrical demand of the residences would be substantially lower than in conventionally built homes.

With the incorporation of **Standard Conditions SC-USS-4** through **SC-USS-7**, impacts from electricity and natural gas will be reduced to less than significant level and no cumulative impacts will result.

4.17.7 Unavoidable Significant Adverse Impacts

The foregoing evaluation demonstrates that even though the Project will cause an unavoidable change in the demand for water and wastewater water utility systems, these various systems can be expanded to meet this increased demand and the facilities required to sustain these systems can be installed without causing an unavoidable significant adverse impact.

Implementation of the Project will result in the additional generation of construction and operational solid waste. Standard conditions address construction debris recycling and reuse to achieve a reduction in waste beyond the County requirement of a 50 percent reduction by weight. Implementation of this measure would reduce the construction waste from the Project at a higher level than required by the County. Therefore, no significant and unavoidable impacts are anticipated.

With adherence to and implementation of the above mitigation measure and those referenced in the Subchapter 4.4 Air Quality, General Plan policies, SCE programs, and existing regulations, the proposed Project's potential electric and natural gas impacts can be controlled and will be reduced below a level of significance.

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4.18 ENERGY

4.18.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of energy from implementation of the Project.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. Energy is a new environmental topic and will be analyzed in the DEIR. This environmental topic was not included in the IS, located in Chapter 8, *Appendices* of this DEIR.

The Energy environmental topic poses the following questions:

Energy.

a. Would the Project result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?
b. Would the Project conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?

The following sources were used in the evaluation presented in this Subchapter:

- *Canterwood (Tentative Tract Map No. 37439) Energy Analysis, County of Riverside*, prepared by Urban Crossroads, February 27, 2019 (*Energy Analysis*, **Appendix Q**)
- *Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment*, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**)

Comment Letters Received on the Notice of Preparation (NOP) / Appended Initial Study (IS)

No comments regarding energy were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018, as this topic was not covered in the Initial Study.

Note: All the Tables and Figures in this Subchapter are from the *Energy Analysis*, unless stated otherwise.

4.18.2 Environmental Setting

4.18.2.1 Overview

This section provides an overview of the existing energy conditions in the Project area and region.

The most recent data for California's estimated annual energy use is from 2016 and included:

- 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:

- Approximately 39.8 percent transportation;
- Approximately 23.7 percent industrial;
- Approximately 17.7 percent residential; and
- Approximately 18.9 percent commercial.

In 2017, 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 4.18-1, *Total Electricity System Power (California 2017)***.

Table 4.18-1
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

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:

- 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.
- 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.
- 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.
- 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.
- In 2017, solar PV and solar thermal installations provided about 16% of California's net electricity generation.

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 being residential uses, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project - namely, electricity and natural gas for residential, and transportation fuel for vehicle trips associated with residential uses planned for the Project.

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. 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 was detailed in the 2013 Integrative Energy Policy Report 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.

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.

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.

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.

Table 4.18-2, *SCE 2017 Power Content Mix*, identifies SCE's specific proportional shares of electricity sources in 2017. As indicated in **Table 4.18-2**, 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 is at 8%, solar energy is at 13%, and coal is at 0%. Biomass and waste sources have decreased to 0% from 11% in 2015. Natural gas is at 20% having decreased from 47% in 2015.

Table 4.18-2
SCE 2017 Power Content Mix

Energy Resources	2016 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.

Natural Gas

The usage associated with natural gas use were 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).

> "The California Public Utilities Commission (CPUC) 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.
>
> 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.
>
> 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.

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.

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.

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.

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.

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).

> 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."

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.

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 identified 35 million registered vehicles in California, and those vehicles (as noted previously) consume an estimated 19 billion gallons of fuel each year. Gasoline (and other vehicle fuels) are commercially-provided commodities and would be available to the Project patrons and employees via commercial outlets.

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.

4.18.2.2 Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

Federal Regulations

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. Transportation and access to the Project site is provided primarily by the local and regional roadway systems.

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-21authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21continues 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.

California Regulations

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 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.

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. 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.

State of California Energy Plan

The 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.

California Code 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 CEC and became effective on January 1, 2017 and is applicable to the Project.

The CEC indicates that the 2019 Title 24 standards will require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30 percent less energy due to lighting upgrades.

Local Regulations

General Plan Goals and Policies

Following are the applicable General Plan Goals and/or Policies:

Energy

- **Policy LU 5.2** Monitor the capabilities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of services.

Energy Conservation and Alternatives

- **Policy OS 11.1** Enforce the state Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.
- **Policy OS 11.2** Support and encourage voluntary efforts to provide active and passive sola

access opportunities in new developments.

- **Policy OS 11.3** Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.
- **Policy OS 16.1** Continue to implement Title 24 of the State Building Code. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of Title 24.
- **Policy OS 16.3** Implement public transportation systems that utilize alternative fuels when possible, as well as associated urban design measures that support alternatives to private automobile use.
- **Policy OS 16.9** Encourage increased use of passive, solar design and day lighting in existing and new structures.

4.18.3 Thresholds of Significance

As discussed in Section 4.18.1, the Project impacts to two (2) criteria pertaining to energy will be analyzed in this DEIR. The Project would have a significant impact if it would:

Energy.

a. Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
b. Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?

Potential changes in the environment associated with energy are addressed in response to the above thresholds in the following analysis.

4.18.4 Potential Impacts

THRESHOLD 4.18.a: Would the Project result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant with Mitigation Incorporated

In order to determine if the Project would result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, the following analysis related to Project construction equipment, transportation energy demands, and facility energy demand has been provided.

Construction Energy Demands

Construction Equipment Electricity Usage Estimates

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project. Based on the 2017 National Construction Estimator, Richard Pray (2017), the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. Based on **Table 4.18-3, *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 $2,097,449.27. Additionally, as of June 1, 2018, SCE's domestic rate schedule (D) for a residential land use is $.09 per kWh of electricity. As shown on **Table 4.18-4, *Project Construction Electricity Usage***, the total electricity usage from on-site Project construction related activities is estimated to be approximately 29,963,561 kWh.

Table 4.18-3
Project Construction Power Cost

Power Cost (per 1,000 SF of building per month of construction)	**Total Building Size** (1,000 SF)	**Construction Duration** (months)	**Total Project Construction Power Cost**
$2.32	11,300.92	80	$2,097,449.27

Table 4.18-4
Project Construction Electricity Usage

Cost per kWh	**Total Project Construction Electricity Usage (kWh)**
$0.07	22,169,425

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 4.18-5, *Construction Equipment Fuel Consumption Estimate***. Eight-hour daily use of all equipment is assumed. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower/hour/gallon, obtained from California Air Resources Board 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 County and region.

As presented in **Table 4.18-5**, Project construction activities would consume an estimated 458,656 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.

Table 4.18-5
Construction Equipment Fuel Consumption Estimates

Activity/Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs./day	Total Fuel Consumption (gal. diesel fuel)
Phase 1							
Mass Grading (155 days)	Graders	187	1	8	0.41	613	5,139
	Rubber Tired Dozers	247	2	8	0.40	1,581	13,245
	Scrapers	367	4	8	0.48	5,637	47,230
Site Preparation (60 days)	Rubber Tired Dozers	247	1	8	0.40	790	2,563
	Tractors/Loaders/Backhoes	97	1	8	0.37	287	931
Building Construction (750 days)	Cranes	231	2	8	0.29	1,072	43,453
	Forklifts	89	6	8	0.20	854	34,638
	Generator Sets	84	2	8	0.74	995	40,320
	Tractors/Loaders/Backhoes	97	6	8	0.37	1,723	69,840
	Welders	46	2	8	0.45	331	13,427
Paving (110 days)	Pavers	130	2	8	0.42	874	5,194
	Paving Equipment	132	2	8	0.36	760	4,521
	Rollers	80	2	8	0.38	486	2,892
Architectural Coating (110 days)	Air Compressors	78	1	8	0.48	300	1,781
Phase 2							
Site Preparation (40 days)	Rubber Tired Dozers	247	1	8	0.40	790	1,709
	Tractors/Loaders/Backhoes	97	1	8	0.37	287	621
Building Construction (600 days)	Cranes	231	2	8	0.29	1,072	34,762
	Forklifts	89	6	8	0.20	854	27,710
	Generator Sets	84	2	8	0.74	995	32,256
	Tractors/Loaders/Backhoes	97	6	8	0.37	1,723	55,872
	Welders	46	2	8	0.45	331	10,742
Paving (75 days)	Pavers	130	2	8	0.42	874	3,542
	Paving Equipment	132	2	8	0.36	760	3,082
	Rollers	80	2	8	0.38	486	1,972
Architectural Coating (75 days)	Air Compressors	78	1	8	0.48	300	1,214
CONSTRUCTION FUEL DEMAND (gallons diesel fuel)							***458,656***

Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated vehicle miles traveled (VMT), the construction worker trips would generate an estimated 3,926,664 VMT. Data regarding Project related construction worker trips were based on CalEEMod 2016.3.2 model defaults utilized within the *Air Quality Impact Analysis for Canterwood (Tentative Tract Map No. 37439), County of Riverside,* dated February 27, 2019 prepared by Urban Crossroads (*AQ Impact Analysis,* **Appendix C**).

Vehicle fuel efficiencies for LDA were estimated using information generated within the 2014 version of the Emissions FACtor model (EMFAC) developed by the Air Resources Board (ARB). 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 the ARB 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 3.2 of the *Energy Analysis*.

As generated by EMFAC 2014, an aggregated fuel economy of LDAs ranging from model year 1974 to model year 2025 are estimated to have a fuel efficiency of 34.99 miles per gallon (mpg). **Table 4.18-6, *Construction Worker Fuel Consumption Estimates***, provides an estimated annual fuel consumption resulting from the Project generated by light duty autos related to construction worker trips. Based on **Table 4.18-6**, it is estimated that 112,234 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.

Table 4.18-6
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)
Vendor Phase 1					
Mass Grading (155 days)	18	14.7	41,013	34.99	1,172
Site Preparation (60 days)	5	14.7	4,410	34.99	126
Building Construction (750 days)	264	14.7	2,910,600	34.99	83,192
Paving (110 days)	15	14.7	24,255	34.99	693
Architectural Coating (110 days)	53	14.7	85,701	34.99	2,450
Vendor Phase 2					
Site Preparation (40 days)	5	14.7	2,940	34.99	84
Building Construction (600 days)	93	14.7	820,260	34.99	23,445
Paving (75 days)	15	14.7	16,538	34.99	473
Architectural Coating (75 days)	19	14.7	20,948	34.99	599
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION					***112,234***

Construction Vendor/Hauling Fuel Estimates

With respect to estimated VMT, the construction vendor/hauling trips would generate an estimated 587,880 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). It is assumed that 100% of all hauling trips are from HHD. 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.

As generated by EMFAC 2014, an aggregated fuel economy of MHD trucks ranging from model year 1974 to model year 2025 are estimated to have a fuel efficiency of 8.67 mpg. Additionally, HHD trucks are estimated to have a fuel efficiency of 6.29 mpg.

Table 4.18-7, *Construction Vendor Fuel Consumption estimates (MHD Trucks)*, and **Table 4.18-8, *Construction Vendor Fuel Consumption estimates (HHD Trucks)*** shows the estimated fuel economy of MHD and HHD trucks accessing the Project site. Based on **Table 4-18-7**, fuel consumption from construction vendor trips (medium duty trucks) will total approximately 33,886 gallons. As per **Table 4.18-8**, fuel consumption from construction vendor trips (heavy duty trucks) will total approximately 76,739 gallons. The total fuel consumption from construction vendor trips is 80,625 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.

Table 4.18-7
Construction Vendor Fuel Consumption Estimates (MHD Trucks)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Phase 1					
Building Construction (750 days)	46	6.9	238,050	8.67	27,443
Phase 2					
Building Construction (600 days)	13.5	6.9	55,890	8.67	6,443
PROJECT MEDIUM DUTY TRUCK TOTAL					***33,886***

Table 4.18-8
Construction Vendor 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					
Phase 1					
Building Construction (750 days)	46	6.9	238,050	6.29	37,852
Phase 2					
Building Construction (600 days)	13.5	6.9	55,890	6.29	8,887
PROJECT HEAVY DUTY TRUCK TOTAL					***46,739***

Construction Energy Efficiency/Conservation Measures

The equipment used for Project construction would conform to CARB regulations and CA 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.

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.

Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations and best available control measures. 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. This is a standard condition and is not considered unique mitigation under CEQA.

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.

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.

As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

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). The Project would implement energy-saving features and operational programs, consistent with the reduction measures set forth in the County of Riverside Climate Action Plan (CAP), to be incorporated into all residential portions 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 County of Riverside. The Project also incorporates and expresses the following design features and attributes promoting energy efficiency and sustainability. This is reflected in **Mitigation Measure MM-GHG-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.

With respect to estimated VMT and based on the trip frequency and trip length methodologies cited in the *AQ Impact Analysis*, the Project would generate an estimated 18,321,815 annual VMT along area roadways for all passenger cars 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 are estimated to have a fuel efficiency of 34.99 mpg. **Table 4.18-9, *Project-Generated Passenger Car Traffic Annual Fuel Consumption***, provides an estimated range of annual fuel consumption resulting from Project generated LDAs. Based on **Table 4.18-9**, it is estimated that 523,684 gallons of fuel will be consumed from Project generated LDA trips.

Table 4.18-9
Project-Generated Passenger Car Traffic Annual Fuel Consumption

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
18,321,815	34.99	523,684

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 The Gas Company; electricity would be supplied to the Project by Southern California Edison. Annual natural gas and electricity demands of the Project are summarized in **Table 4.18-10, *Project Annual Operational Energy Demand Summary***.

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.).

Table 4.18-10
Project Annual Operational Energy Demand Summary

Natural Gas Demand	**kBTU/year**
City Park	0
Single-Family Housing	17,562,200
Total Project Natural Gas Demand	**17,562,200**
Electricity Demand	**kWh/year**
City Park	0
Single-Family Housing	5,003,260
Total Project Electricity Demand	**5,003,260**

Operational Energy Efficiency/Conservation Measures

Energy efficient/energy conserving design features and operational programs that would be implemented under the Project are summarized below. Also noted in the following discussions, 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., Title 24, California Green Building Standards Code). The Project would also 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.

Enhanced Vehicle Fuel Efficiencies

Estimated annual fuel consumption estimates, presented previously in **Table 4.18-9**, represent likely potential maximums that would occur in 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.

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 conservations goals within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

THRESHOLD 4.18.b: Would the Project conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?

Less Than Significant with Mitigation Incorporated

The Project would implement energy-saving features and operational programs, consistent with the reduction measures set forth in the County of Riverside CAP, to be incorporated into all residential portions 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 County of Riverside.

As discussed in Threshold 4.18.a, 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 recreational and residential 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. Further, the Project would not cause or result in the need for additional energy producing facilities or energy delivery systems. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

4.18.5 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The Project shall 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

Mitigation Measure(s)

Operations-related mitigation measures, which also apply to Air Quality and Greenhouse Gas Emissions, are as follows:

MM-GHG-1 Prior to issuance of each building permit, the Project Applicant shall provide documentation to the County of Riverside Building Department demonstrating that the improvements and/or buildings subject to each building permit application include the following measures from the County of Riverside Climate Action Plan (November 2019) Greenhouse Gas Emissions Screening Tables (Appendix F to the Climate Action Plan), as

needed to achieve the required 100 points. Alternatively, the specific measures may be substituted for other measures, so long as 100 points are still achieved on the checklist, subject to County of Riverside Building Department review:

1. **Measure EE5.A.1 Insulation - Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) (9 points)**
2. **Measure EE5.A.2 Windows - Enhanced Window (0.32 U-factor, 0.25 SHGC) (4 points)**
3. **Measure EE5.A.3 Cool Roofs - Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) (7 points)**
4. **Measure EE5.A.4 Air Infiltration - Blower Door HERS Verified Envelope Leakage or equivalent (5 points)**
5. **Measure EE5.B.1 Heating/Cooling Distribution System - Modest Duct Insulation (R-6) (4 points)**
6. **Measure EE5.B.2 Space Heating/Cooling Equipment - Very High Efficiency HVAC (SEER 16/82% AFUE or 9 HSPF) (5 points)**
7. **Measure EE5.B.3 Water Heaters - Very High Efficiency Water Heater (0.92 Energy Factor) (11 points)**
8. **Measure EE5.B.5 Artificial Lighting - High Efficiency Lights (50% of in-unit fixtures are high efficiency) (6 points)**
9. **Measure EE5.B.6 Appliances - Energy Star Refrigerator (new) Energy Star Dishwasher (new) Energy Star Washing Machine (new) (3 points)**
10. **Measure CE1.A.1 Photovoltaic - 50 percent of the power needs of the Project (17 points)**
11. **Measure W2.A.2 Water Efficient Landscaping - Weather based irrigation control systems or moisture sensors (demonstrate 20% reduced water use) (2 points)**
12. **Measure W2.B.1 Showers - Water Efficient Showerheads (2.0 gpm) (2 points)**
13. **Measure W2.B.2 Toilets - Water Efficient Toilets (1.5 gpm) (2 points)**
14. **Measure W2.B.3 Faucets - Water Efficient faucets (1.28 gpm) (2 points)**
15. **Measure W2.B.4 Dishwasher - Water Efficient Dishwasher (6 gallons per cycle or less) (1 points)**
16. **Measure W2.B.5 Washing Machine - Water Efficient Washing Machine (Water factor <5.5) (1 points)**
17. **Measure W2.B.6 WaterSense - EPA WaterSense Certification (7 points)**
18. **Measure T4.A.1 Electric Vehicle Recharging - Install electric vehicle charging stations for each residential unit included in the Project. Projects that include charging stations for fewer than all units shall receive points on a proportional basis. (8 points)**
19. **Measure S1.A.1 Recycling - Provide green waste composting bins at each residential unit (4 points)**

4.18.6 Cumulative Impacts

Energy usage is assumed to be cumulative. The proposed Project will result in an incremental use of energy during construction and operations. 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 conservations goals within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Project-related energy usage is not considered to be cumulatively considerable and would not result in a significant impact with the incorporation of **Mitigation Measure MM-GHG-1**.

4.18.7 Unavoidable Significant Adverse Impacts

The proposed Project will result in an incremental use of energy during construction and operations. 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 conservations goals within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

With implementation of **Mitigation Measure MM-GHG-1**, impacts would be reduced to a less than significant level. Project-related energy usage is not considered to be significant or adverse and will not result in an unavoidable significant adverse impact.

4.19 WILDFIRE

4.19.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of wildfire from implementation of the Project.

Subsequent to the Initial Study being circulated and prior to the DEIR being completed, the County of Riverside revised its Initial Study checklist. These revisions were made based on the changes adopted in November 2018, by the State of California, to the guidelines for implementing CEQA, Appendix G Environmental Checklist Form. Wildfire is a new environmental topic and will be analyzed in the DEIR. This environmental topic was not included in the IS, located in Chapter 8, *Appendices* of this DEIR.

The Wildfire environmental topic poses the following questions:

Wildfire Impacts.

a. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan??
b. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project, 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. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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?
d. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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?
e. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The following sources were used in the evaluation presented in this Subchapter:

- *Map My County, (***Appendix A**)
- The *Riverside County General Plan (Safety Element)* https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx
- Ordinance No. 787 (An Ordinance of the County of Riverside Adopting the 2016 California Fire Code as Amended)

http://www.rivcocob.org/ordinances/

- Ordinance No. 659 (An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program)
  http://www.rivcocob.org/ordinances/

Comment Letters Received on the Notice of Preparation (NOP)/Appended Initial Study (IS)

No comments regarding wildfire were received in response to the NOP/IS or at the Scoping Meeting held on November 5, 2018, as this topic was not covered in the Initial Study.

4.19.2 Environmental Setting

4.19.2.1 Project Site and Surroundings

The Project is located in unincorporated Riverside County, California east of the City of Menifee. The Project area is separated from the coastline approximately 34 miles across the Santa Ana Mountain range. Regional access to the area is provided to the general area in a north-south direction by the Interstate 215 (I-215) freeway and by Highway 79, and State Route 74 in an east-west direction.

The Project area is located in the eastern portion of the Menifee Valley, one of the many tectonically controlled valleys within the valley-and-ridge systems found in the Perris Block. These structurally depressed troughs are filled with non-marine sediments of upper Pliocene through Recent age, while the ridges are typically composed of plutonic igneous rocks, metasedimentary rocks, and late-stage intrusive dikes.

The Perris Block is defined as a region between the San Jacinto and Elsinore-Chino fault zones, bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley. It is considered to have been active since Pliocene time. The Project area lies across the level valley floor, away from the flanks of any of the ridge systems. In this area, the valley trends nearly east-west and is likely to be more erosional than tectonic in origin.

Residential Project Site Components

The Residential Project site consists of a generally square-shaped tract of agricultural land in Assessor's Parcel Numbers (APN) 466-310-002 and -026, bounded by Holland Road on the north, Eucalyptus Road on the east, Craig Avenue on the south, and Leon Road on the west. The Project site is approximately 158.18 gross acres. The terrain is generally level, with elevations ranging between approximately 1,425 feet and 1,440 feet above mean sea level (AMSL). Portions of the agricultural fields at the main Project site are planted in such crops as potatoes and cilantro. The field to the west of Leon Road, where the flood-control channel right-of-way lies, is currently used for cattle grazing.

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads and single family residential land uses.

Off-Site Project Components

The site of the proposed offsite trapezoidal earthen drainage channel (Holland Channel) lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed offsite trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Southshore Drive to the west. The proposed trapezoidal earthen drainage channel bounded at east by Eucalyptus Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Southshore Drive. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the Holland Road, Briggs Road, and Tres Lagos Road ROWs. All three of these roadways have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. The Holland Road off-site roadway improvements will also be located within the existing ROW. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

Fire Responsibility Area and Fire Hazard Area

Figure 4.19-1, *Fire Responsibility Area*, and **Figure 4.19-2, *Fire Hazard Area*** show the Project site in reference to surrounding fire responsibility areas and fire hazard areas, respectively. The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as “State Responsibility Areas.” This same area is identified as a “moderate fire hazard area.”

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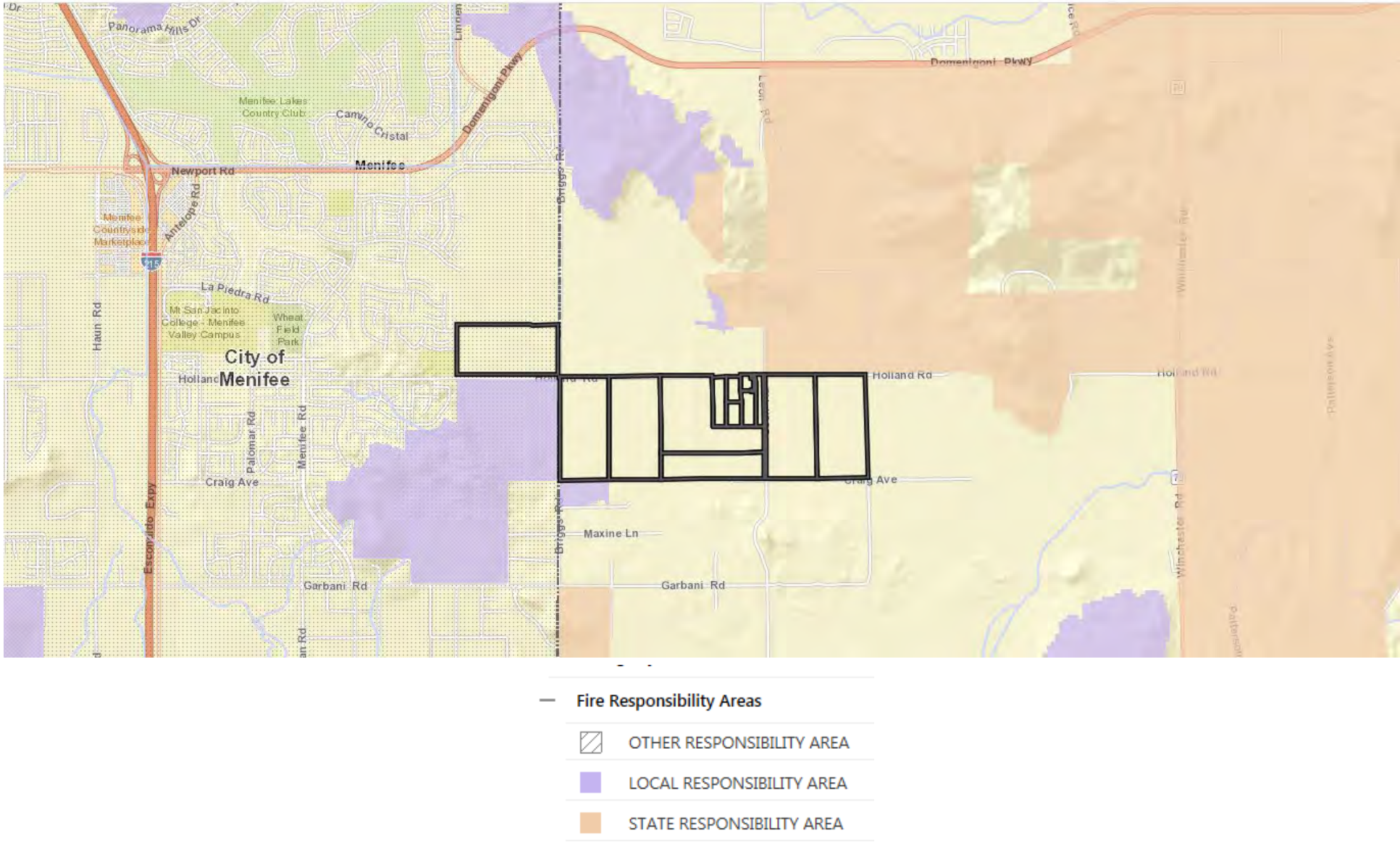
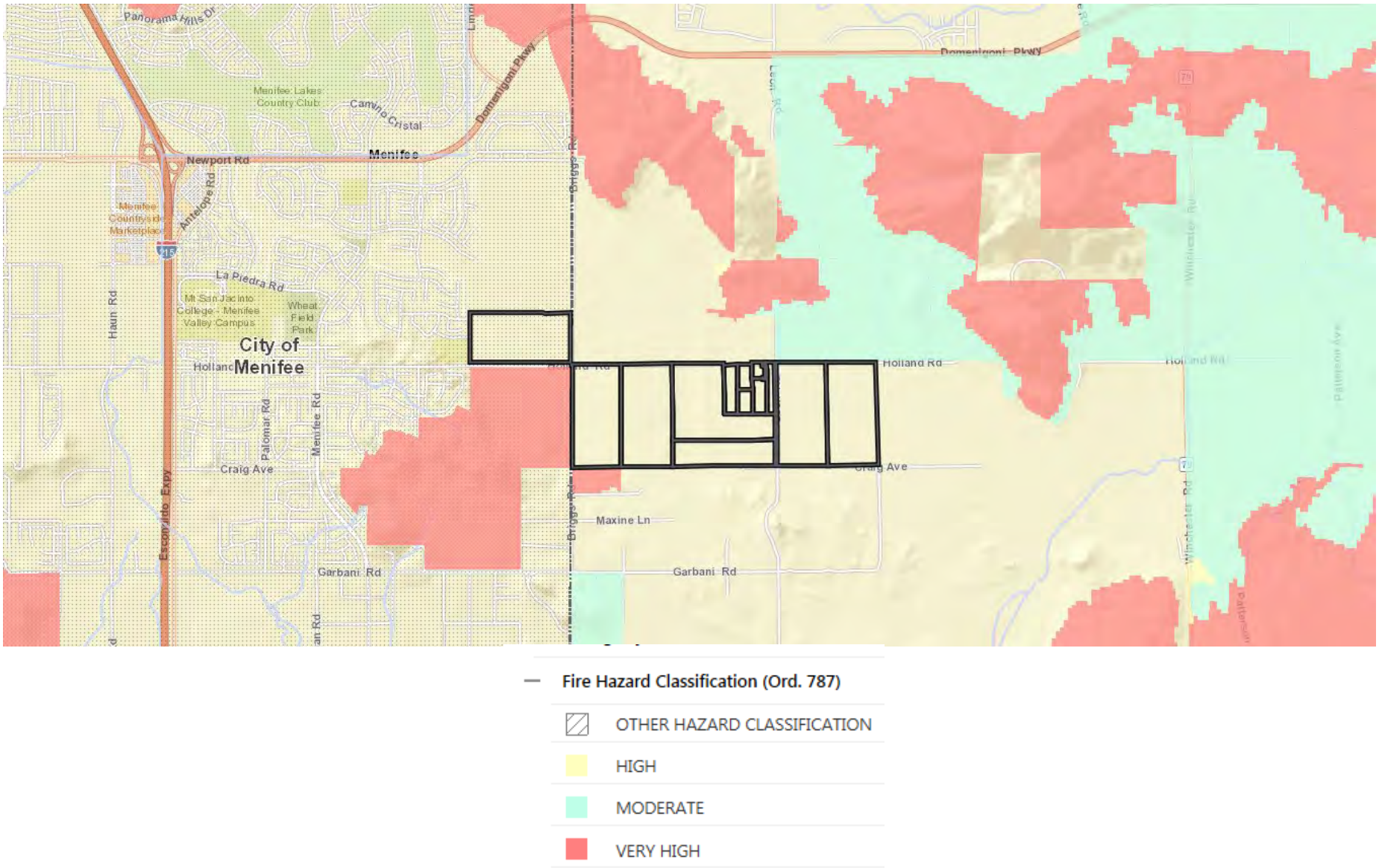
FIGURE 4.19-1
FIRE RESPONSIBILITY AREA



Source: Map May County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public

FIGURE 4.19-2
FIRE HAZARD AREA



Source: Map May County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public

4.19.2.2 Existing Regulations and Plans

Fire Regulations

Fire codes are important to all building construction. According to *Map My County*, the Project site is located within an area identified as a moderate fire hazard. (The Project site is in a State Responsibility Area. As State responsibility area is a legal term defining the area where the State has financial responsibility for wildland fire protection. Incorporated cities and federal ownership are not included.)

The Project site is served by the Riverside County Fire Department/CAL Fire. The closest station to the Project site is the Riverside County Menifee Lakes Fire Station-76, located at 29950 Menifee Road, Menifee, CA 92584. This station is located approximately 4 miles northwest of the Project site.

The County of Riverside and the Riverside County Fire Department have adopted the California Building Standards Code, which includes the most current version of the California Fire Code and the California Building Code (CBC). The Uniform Fire Code established by the International Fire Code Institute and the Uniform Building Code (UBC) established by the International Conference of Building Officials, both prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection. The Riverside County Fire Department Chief is authorized and directed to enforce the provisions of the California Fire Code throughout the County. The California Fire Code contains standards for access to a site, building design, water supply, storage of hazardous materials and brush clearance. The California Building Code prescribes performance characteristics and materials to be used to achieve acceptable levels of fire protection based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed.

For purposes of this DEIR, whatever fire or building code is current and adopted by the County and County Fire at the time of Project development for the particular issue/regulation being referenced in the DEIR shall be applicable code.

The Riverside County Fire Department Office of the County Fire Marshal (OFM) charges project applicant deposit-based fees, established in Riverside County Ordinance No. 671, for the review and related processing of all planning case applications conducted by the west and east County OFM offices. In addition, development fees are collected to help offset the cost of providing new fire facilities.

General Plan Goals and Policies

Following are the applicable General Plan Goals and/or Policies related to fire hazards:

- **Policy S 5.1** Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:
  a. All proposed construction shall meet minimum standards for fire safety as defined in the County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.

b. In addition to the standards and guidelines of the Uniform Building Code and Uniform Fire Code fire safety provisions, continue additional standards for high- risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not:
   - Impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor
   - Hinder evacuation from fire, including potential blockage of stairways or fire doors.

c. Proposed development in Hazardous Fire areas shall provide secondary public access, unless determined otherwise by the County Fire Chief.

d. Proposed development in Hazardous Fire areas shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the County Fire Chief.

- **Policy S 5.6** Ensure coordination between the Fire Department and the Transportation Land Management Agency, Environmental Health Department, and private and public water purveyors to improve fire fighting infrastructure, during implementation of the County's capital improvement programs, by obtaining:
  - Replacement and/or relocation of old cast-iron pipelines and inadequate water mains when street improvements are planned;
  - Assessment of impact fees as a condition of development; and
  - Redundant emergency distribution pipelines in areas of potential ground failure or where determined to be necessary.
- **Policy S 5.8** Periodically review inter-jurisdictional fire response agreements, and improve fire fighting resources as recommended in the County Fire Protection Master Plan to keep pace with development, including construction of additional high-rises, mid-rise business parks, increasing numbers of facilities housing immobile populations, and the risk posed by multiple ignitions, to ensure that:
  - Fire reporting and response times do not exceed those listed in the County Fire Protection Master Plan identified for each of the development densities described;
  - Fire flow requirements (water for fire protection) are consistent with Insurance Service Office recommendations; and
  - The planned deployment and height of aerial ladders and other specialized equipment and apparatus are sufficient for the intensity of development desired.
- **Policy S 5.9** Continue County Fire Department collaboration with the Transportation Land Management Agency (TLMA) to update development guidelines for the urban/wildland interface areas. These guidelines should include increasing the development area to at least 30 feet past the usual boundary.
- **Policy S 5.10** Continue to utilize the Riverside County Fire Protection Master Plan as the base document to implement the goals and objectives of the Safety Element.
- **Policy S 6.1** Enforce the policies and siting criteria and implement the programs identified in the County of Riverside Hazardous Waste Management plan, which includes the following:
  a. Comply with federal and state laws pertaining to the management of hazardous wastes and materials.
  b. Ensure active public participation in hazardous waste and hazardous materials management decisions in Riverside County.
  c. Coordinate hazardous waste facility responsibilities on a regional basis through the Southern California Hazardous Waste Management Authority (SCHWMA).
  d. Encourage and promote the programs, practices, and recommendations contained in

the County Hazardous Waste Management Plan, giving the highest waste management priority to the reduction of hazardous waste at is source.

- **Policy S 7.1** Continually strengthen the Multi-Hazard Functional Plan and maintain mutual aid agreements with federal, state, local agencies and the private sector to assist in:
  a. Clearance of debris in the event of widespread slope failures, collapsed buildings or structures, or other circumstances that could result in blocking emergency access or regress;
  b. Heavy search and rescue;
  c. Fire suppression;
  d. Hazardous materials response;
  e. Temporary shelter;
  f. Geologic and engineering needs;
  g. Traffic and crowd control; and
  h. Building inspection.

Following are the applicable General Plan Goals and/or Policies related to emergency response plans:

- **Policy S 7.2** Encourage the utilization of multilingual staff personnel to assist in evacuation and short-term recovery activities, and meeting general community needs. (AI 97)
- **Policy S 7.4** Use incentives and disincentives to persuade private businesses, consortiums, and neighborhoods to be self-sufficient in an emergency by:
  - Maintaining a fire control plan, including an on-site firefighting capability and volunteer fire response teams to respond to and extinguish small fires; and
  - Identifying medical personnel or local residents who are capable and certified in first aid and CPR.

4.19.3 Thresholds of Significance

As discussed in Section 4.19.1, the Project impacts to five (5) criteria pertaining to wildfire will be analyzed in this DEIR.

Wildfire Impacts.

a. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?
b. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project, 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. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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?
d. If located in or near a State Responsibility Area ("SRA"), lands classified as very high

fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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?

e. If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Potential changes in the environment associated with wildfire are addressed in response to the above thresholds in the following analysis.

4.19.4 Potential Impacts

THRESHOLD 4.19.a: If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact

The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area."

The Project will take access from existing roadways, and roadways that will be improved. These roadways will connect into part of an adopted emergency response plan/emergency evacuation plan, as implemented by the County of Riverside.

The Project will be constructing residential uses, park facilities, drainage facilities, sewer lines and roadways. A limited potential exists to interfere with an emergency response or evacuation plan during construction. Control of access will ensure emergency access to the site and Project area during construction through the submittal and approval of a traffic control plan (TCP). The TCP is designed to mitigate any construction circulation impacts. The TCP is included as **Standard Condition SC-TR-2**. **SC-TR-2** is not considered unique mitigation under CEQA.

The proposed Project will be reviewed, and conditions of approval will be placed on the proposed Project to address any potential impacts to Fire Resources, consistent with the Fire Hazards section of the Safety Element of the General Plan, and Ordinance No. 787.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. Prior to final map recordation, prior to grading permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787. Adherence to Ordinance No. 787 (**Standard Condition SC-HAZ-1**) is typically a standard condition of

approval and is not considered unique mitigation pursuant to CEQA.

Another standard condition assessed on the proposed Project to reduce impacts from the proposed Project to fire services is Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. Development Impact Fees (DIF) for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate DIF fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. **Standard Condition SC-PS-1** relates to Fire Services which are discussed within Section 36, Fire Services, of the IS, located in Chapter 8, *Appendices* of this DEIR.

Following construction, emergency access to the Project site and area will remain as was prior to the proposed Project. Therefore, implementation of the Project will not substantially impair an adopted emergency response plan or emergency evacuation plan. Any impacts are considered less than significant.

THRESHOLD 4.19.b: If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the Project, 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?

Less Than Significant Impact

The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area."

The site currently ranges in elevation from approximately 1,434 feet above mean sea level (AMSL) on the western side of the Project site to 1,445 AMSL in the northeastern corner of the site. Based on this information, the Project would not, 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. Any impacts are considered less than significant.

THRESHOLD 4.19.c: If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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

The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area."

The Project does not include and or 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. Any roads and utilities will be installed in accordance with the respective jurisdiction requirements. Holland Road, as parkway landscaping shall serve as a fire break for the Project. Any impacts will be less than significant.

THRESHOLD 4.19.d: If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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

The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area."

The topography of the Project site is relatively flat with natural gradients less than 2% to the south-southwest toward SR 74. The site elevation is approximately 1,468 – 1,484 feet AMSL. The Project will include hardscape and landscape improvements that would serve tot stabilize the built environment. Based on this information, 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. Any impacts would be less than significant.

THRESHOLD 4.19.e: If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, 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

The entire Project site is not located within either a fire responsibility area or a fire hazard area. The only habitable portion of the Project is contained within the Residential Project Site Components. Northerly of the Residential Project Site Components (north of Holland Road) are properties designated as "State Responsibility Areas." This same area is identified as a "moderate fire hazard area."

The proposed Project will be reviewed, and conditions of approval will be placed on the proposed Project to address any potential impacts to Fire Resources, consistent with the Fire Hazards section of the Safety Element of the General Plan, and Ordinance No. 787.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. Prior to final map recordation, prior to grading permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787. Adherence to Ordinance No. 787 (**Standard Condition SC-HAZ-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Another standard condition assessed on the proposed Project to reduce impacts from the proposed Project to fire services is Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. Development Impact Fees (DIF) for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate DIF fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. **Standard Condition SC-PS-1** relates to Fire Services which are discussed within Section 36, Fire Services, of the IS, located in Chapter 8, *Appendices* of this DEIR.

Based on this information, the Project would not, expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Any impacts are considered less than significant.

4.19.3 Avoidance, Minimization, Standard Conditions, and Mitigation Measures

Avoidance

No avoidance measures are required.

Minimization

No minimization measures are required.

Standard Condition(s)

The following standard conditions were identified in the IS in order to ensure that the Project's potential to expose people or structures to a significant risk of loss, injury or death involving

wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, or to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan was reduced to a less than significant level:

SC-HAZ-1 **Prior to final map recordation, prior to grading permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787.**

SC-TR-2 **The Applicant is required to develop and implement a City-approved Traffic Control Plan (TCP) addressing potential construction-related traffic detours and disruptions. In general, the TCP will ensure that to the extent practical, construction traffic would access the Project site during off-peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses.**

SC-PS-1 **Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.**

Mitigation Measure(s)

No specific mitigation measures are required for wildfire.

4.19.4 Cumulative Impacts

Also according to the IS, the Project would have a less than significant impact such that it would impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan (see **Standard Condition SC-TR-2**), 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; 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; 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; or, expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (see **Standard Condition SC-HAZ-1** and **Standard Condition SC-PS-1**).

4.19.5 Unavoidable Significant Adverse Impacts

The Project will change the land use on the Project site and create a potential for certain adverse impacts regarding wildfire issues both during construction and occupancy. There will be some adverse impacts as a result of implementing the Project. However, adherence to **Standard Conditions SC-HAZ-1**, **SC-PS-1**, and **SC-TR-2**, these potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level for wildfire issues. Thus, the Project is not forecast to cause any unavoidable significant adverse wildfire impacts. The Project wildfire impacts are less than significant.

CHAPTER 5 – ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) and the State CEQA Guidelines require an evaluation of alternatives to the proposed action. The purpose of the alternatives evaluation under CEQA is to determine whether one or more feasible alternatives is capable of reducing potentially significant impacts of a preferred project to a less than significant level.

The applicable text in the State CEQA Guidelines occurs in Section 15126 as follows:

> Section 15126.6 (a): *Alternatives to the Proposed Project. 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.*
>
> Section 15126.6 (b) *Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.*

The Project objectives are defined in Chapters 1 and 3 as follows:

- Provide a variety of housing opportunities to assist the County in meeting General Plan Housing Element Goals and Objectives;
- Provide a centrally located community park with active and passive recreational opportunities that meets the recreation needs of future residents;
- Develop a comprehensive interconnected public trail and walkway system within the Project and connecting to the County-wide trail system;
- Develop joint use maintenance roads which will serve as hiking trails when adjacent to regional drainage facilities;
- Development of a comprehensive Project design that is sensitive to the environment, aesthetically pleasing, provides for the protection of health and safety, and promotes the neighborhood, the community, the County and the region;
- Take into consideration the existing topographic, geologic, hydrologic, and environmental opportunities and constraints, and create a Project design that essentially conforms to the condition of the land by maintaining and using basic landforms where practical; and
- Establish a Project-wide circulation system that meets regional and local transportation needs and accommodates a variety of transportation modes, including roadways, sidewalks and bicycle lanes.

<u>Overview of Alternatives</u>

No Project Alternative (NPA)

One of the alternatives that must be evaluated in an environmental impact report (EIR) is the No

Project Alternative (NPA), regardless of whether it is a feasible alternative to the proposed Project, i.e., would meet the project objectives or requirements. Under this alternative, the environmental impacts that would occur if the proposed Project is not approved and implemented are identified. The NPA assumes the property remains in its current state – vacant land.

Reduced Project Intensity Alternative (RPIA)

Under the Reduced Project Intensity Alternative (RPIA) the entirety of the Project would be developed at the low end of the density range for Medium Density Residential (2-5 dwelling units/acre) General Plan Land Use Designation. In total, 316 dwelling units would be allowed under the RPIA (158 acres x 2 dwelling units/acre). This is a decrease of 258 dwelling units on the Project site, when compared to the proposed Project.

Subsurface Drainage Alternative (SDA)

Under the Subsurface Drainage Alternative (SDA), all earthen channels utilized for the Project shall be undergrounded in concrete reinforced pipes. This would include the Residential Project site components, as well as the Off-site Project components. This alternative assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes.

Concrete Culvert Alternative (CCA)

Under the Concrete Culvert Alternative (CCA), all earthen channels utilized for the Project shall be contained within concrete culverts. This would include the Residential Project site components, as well as the Off-site Project components. This alternative assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes; however, it will have a slightly larger development footprint than the SDA.

No other alternatives to the proposed Project are given consideration or evaluated in this Chapter since no other practical or feasible alternatives have been proposed. For example, a light industrial or commercial project would have no demand in this area due to the County's desire to locate these uses within other portions of the County, and due to the lack of any rationale for a light industrial uses to locate in this general project area. Finally, a substantially lower density, with substantially fewer dwelling units would not generate sufficient funds to meet the goals of the Project proponent, as well as fit in in with the existing development character of the Project vicinity.

Thus, the alternatives considered in this Chapter include:

1. No Project Alternative (NPA);
2. Reduced Project Intensity Alternative (RPIA);
3. Subsurface Drainage Alternative (SDA); and
4. Concrete Culvert Alternative (CCA).

The following evaluation also includes identification of an environmentally superior alternative as required by the State CEQA Guidelines. The four (4) alternatives were developed during review of

the Project with the County of Riverside and include all components of the Project. No other plausible alternatives were identified during the review process for consideration in this DEIR.

The analysis and information contained in Chapter 2, *Introduction*, Chapter 3, *Project Description*, and Chapter 4, *Environmental Impact Evaluation*, of this DEIR, were used for the analysis in this Chapter.

The following Project analysis will be utilized for the alternative discussion, below.

Aesthetics

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. However, this change was anticipated under the General Plan Land Use Plan. The General Plan EIR (Section 4.4.3) states:

> "*Build out of the proposed General Plan would result in a substantial increase in urban uses throughout the proposed General Plan area. The development of structures and facilities would occur on vacant properties within unincorporated areas of the County and would be consistent with the policies outlined in the proposed General Plan. Similarly, the replacement, expansion, or refurbishment of existing development would occur pursuant to the proposed General Plan policies...*"
>
> and concludes:
>
> "*The proposed General Plan includes policies that will: concentrate growth near or within existing urban and suburban areas; preserve the existing rural and open space character of the County; provide for the permanent preservation of important natural and scenic resources; incorporate open space within developed areas; ensure the compatibility of existing and new development; maintain or enhance the character of the project site and its immediate area; conserve view corridors, skylines, and scenic vistas; and impose restrictions on development activities that may adversely affect the existing visual characteristics of sites within the County. Furthermore, Appendix J of the proposed General Plan contains Community Center Guidelines, that address landscape, streetscape, building, layout, and other aspects of the community centers. Adherence to these guidelines would reduce or eliminate aesthetic impacts relating to community center development.*"

There will be an associated change in views, both to and from the Project site.

As discussed in the Initial Study, the Project will not have a substantial effect upon a scenic highway corridor within which it is located. The Project site is not located within view from a state scenic highway. In addition, with adherence to code requirements and Project design features, the Project will not interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655; create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or expose residential property to unacceptable light levels (see **SC-AES-2** and **SC-AES-3**).

No scenic vistas will be significantly altered due to implementation of the Project. Mountains that are visible from the Project site, or the immediate environs are faint, at best. In addition, there are no scenic vistas within the area that will be affected by the Project. While some views from the existing (and proposed) development may be obscured by the Project, they are not a true scenic

view, as described by the General Plan EIR.

The Project will clearly change the visual setting for the Project site and its immediate environs. The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential. The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **SC-AES-1**).

Impacts were not deemed cumulative, and there were no unavoidable, significant adverse impacts

Agriculture and Forest Resources

As stated in the Initial Study, there is no timberland zoning on the Project site, nor is there any forest land on the Project site. Therefore the Project will not create any impacts (including cumulative impacts) to forestry resources due to a conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g)), the result in the loss of forest land or conversion of forest land to non-forest use, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

The Project is not subject to the Williamson Act or within a Riverside County Agricultural Preserve. The Project will have a less than significant impact as it pertains to the conversion of 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, in a conflict with existing agricultural zoning or agricultural use, or cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 “Right-to-Farm”) (see **Standard Condition SC-AG-1**).

Mitigation Measure MM-AG-1 has been included proposed to reduce conflicts between the Project and existing agricultural uses in proximity of the Project site (based on changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use) to a less than significant level.

Since the proposed Project will not have any significant adverse impact to agricultural or forestry resources or resource values, it cannot make a cumulatively considerable contribution to such resources or values. The Project’s cumulative agricultural and forestry impacts are considered less than significant. There are no unavoidable significant adverse agricultural or forest resources impacts.

Air Quality

The Project-specific evaluation of emissions demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-AQ-2**, as well as **Mitigation Measure MM-AQ-1**, the proposed Project would not result in exceedances of regional air quality thresholds during construction. Therefore, the proposed Project construction-source air emissions would be considered a less than significant impact.

Mitigation Measure MM-GHG-1 shall be implemented to reduce operational source (VOC) emissions. 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. No feasible mitigation measures exist that would reduce this impact to less than significant levels.

Additionally, over 84 percent 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 beyond what is contained in **Mitigation Measure MM-GHG-1** that would reduce NO_x emissions to levels that are less than significant. Therefore, these emissions are considered significant and unavoidable.

Conflicts due to odors between the Project and the adjacent agricultural uses can be addressed through mitigation. Mitigation can be achieved by establishing a line of communication between the local farmers and future residents of the Project (**Standard Condition SC-AG-1** and **Mitigation Measure MM-AG-1**). These impacts are not considered cumulative in nature.

Biological Resources

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently exists or can occur on the site or in the surrounding vicinity. The proposed Project will not cause adverse cumulative effects related to the reduction of sensitive vegetation communities or degradation of other biology values present in western Riverside County.

With adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1, MM-BIO-2,** and **MM-BIO-3**, the Project will have a less than significant 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 Wildlife or U.S. Fish and Wildlife Service; will not substantially interfere 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; and will have no significant impacts (including cumulative impacts) as it pertains to effects 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 Wildlife or US Fish and Wildlife Service; or on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

As stated in the IS, there are no oak trees on the Project site. The County's Oak Tree Management Guidelines would not be applicable. The provisions of Ordinance No. 559 would not apply since the Project site is not above 5,000 feet in elevation. No other tree preservation policy or ordinance apply to the Project site. Therefore, implementation of the Project will not conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance. No impacts will occur. Therefore, there will be no cumulative impacts.

There are no significant biology resources located within the Project site and the Project can be implemented consistent with the criteria identified in the MSHCP, with adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**.

Based on adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**, and the overall lack of any habitat to support sensitive species or a substantial wildlife

population, the proposed Project will not result in adverse cumulative biology resource impacts that rise to a cumulatively considerable level. In addition, the proposed Project is not forecast to cause significant unavoidable adverse impacts to biological resources.

Cultural Resources

With adherence to **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, all potential impacts to cultural, and/or archaeological resources will be limited and reduced to a level of less than significant. As a result, implementation of the proposed Project will not result in any unavoidable Project-specific or cumulative adverse impacts to cultural and/or archaeological resources.

Geology and Soils

Development of the Project will be affected by geotechnical constraints. None of the future Project-related activities are forecast to cause changes in geology or soils or the constraints affecting the Project area that cannot be fully mitigated. Geology and soil resources are inherently site specific and the only cumulative exposure would be to a significant geological or soil constraint (onsite fault, significant ground shaking that could not be mitigated or steep slopes creating a landslide exposure). Therefore, the Project has no potential to make a cumulatively considerable contribution to any significant geology or soils impact. Project soil and geology impacts are less than significant with the incorporation of **Standard Conditions SC-GEO-1** through **SC-GEO-3**, **SC-AQ-2**, **SC-HYD-1** through **SC-HYD-3**. The Project can be implemented without causing or experiencing cumulative, or significant unavoidable adverse geology or soil impacts.

Greenhouse Gas Emissions

The proposed Project may contribute to global climate change by its incremental contribution of greenhouse gases. With implementation of **Standard Condition SC-GHG-1** and **Mitigation Measure MM-GHG-1,** emission rates will be consistent with applicable significance thresholds established by the CAP. With implementation of these mitigation measures, impacts would be reduced to a less than significant level.

Thus, the proposed Project would not result in significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts with implementation of the mitigation measures. Project-related GHG emissions are not considered to be cumulatively considerable and would not result in an unavoidable significant adverse impact on global climate change.

Hazards and Hazardous Materials

According to the IS, the Project will have no impact such that it is 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, result in an inconsistency with an Airport Master Plan, require review by the Airport Land Use Commission, (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 result in a safety hazard for people residing or working in the Project area, or, (for a project within the vicinity of a private airstrip, or heliport), would result in a safety hazard for people residing or working in the Project area).

Also according to the IS, the Project would have a less than significant impact such that it would impair implementation of or physically interfere with an adopted emergency response plan or an

emergency evacuation plan (see **Standard Condition SC-TR-2**), emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (see **Standard Condition SC-HYD-1** and **Standard Condition SC-HYD-2**), or, expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (see **Standard Condition SC-HAZ-1** and **Standard Condition SC-PS-1**).

Project construction would involve the routine use of hazardous materials, including fuels, paints, and solvents. However, the amount of these materials during construction would be limited and regulated. Therefore, they would not be considered a significant environmental hazard. Implementation of BMPs would further reduce any impacts associated with hazardous materials during Project construction (see **Standard Condition SC-HYD-1**).

Project operational activities would involve the use of storage of household hazardous materials typical of residences. These uses would not present a significant hazard to the residents of the community or to the environment with regulatory compliance procedures in place (see **Standard Condition SC-HYD-2**).

Mitigation Measure MM-HAZ-1 through **Mitigation Measure MM-HAZ-4**, are provided to reduce potential adverse hazards and hazardous material impacts related to accidental releases of hazardous materials during construction and operations, including known and unknown substances, and soils excavated from existing ponds.

Based on adherence to **Standard Conditions SC-HAZ-1**, **SC-HYD-1**, **SC-HYD-2**, **SC-PS-1**, and **SC-TR-2**, and incorporation of **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**, the proposed Project will not result in adverse cumulative hazard and hazardous materials impacts that rise to a cumulatively considerable level. In addition, the Project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts.

Hydrology and Water Quality

The proposed Project was evaluated as to whether it will have a potential to cause significant flood hazards and a potential to substantially degrade water quality onsite and downstream. **Standard Conditions SC-HYD-1** through **SC-HYD-5** and design measures to control the proposed Project's contributions to flood hazards and water quality degradation have been defined and are available to control future hydrology and water quality degradation to a less than significant impact level. With implementation of the proposed stormwater management design, as outlined in the Project Specific WQMPs, and **Standard Conditions SC-HYD-1** through **SC-HYD-5**, future stormwater runoff after development of the Project site is not forecast to make a cumulatively considerable contribution to downstream flood hazards and water quality in the Santa Ana River Watershed. This conclusion is based on the findings that the proposed **Standard Conditions SC-HYD-1** through **SC-HYD-5** and design measures will not increase runoff from the Project site and will provide adequate attenuation of water pollutants in runoff from this residential area so as not to make a cumulatively considerable contribution to the runoff volume or water pollution within the Santa Ana River Watershed. Project hydrology and water quality cumulative impacts are less than significant and will not cause unavoidable significant hydrology or water quality impacts.

Land Use and Planning

The IS determined that the Project would not affect land use within a city sphere of influence and/or within adjacent city or county boundaries. The Project will be consistent with the site's

existing and proposed zoning, will be compatible with existing surrounding zoning, and will be compatible with existing and planned surrounding land uses.

Lastly, the Project will represent a change to a rural area that will result in a suburban form of development. This form of development is anticipated in the General Plan for the Project site and the environs surrounding the Project site. The Project would disrupt or divide the physical arrangement of an established community (agricultural, vacant, or large lot single-family residential); however, this impact will be less than significant.

Therefore, the Project will not result in significant cumulative impacts, and will not cause significant unavoidable adverse impacts relative to the land use and planning.

Mineral Resources

As described in the IS, the Project site and surrounding area do not contain any existing mineral development or any identified potential for mineral resource development. Based on these data, the proposed Project has no potential to cause any unavoidable adverse impact to mineral resources or values in Riverside County.

Noise

The Initial Study indicated that there would be no impacts from the Project such that it would expose people residing or working in the Project area to excessive noise levels due to being 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, or expose people residing or working in the Project area to excessive noise levels due to being located within the vicinity of a private airstrip, or any railroad noise. No cumulative impacts would result.

Construction impacts will be less than significant. However, Best Management Practices, included as **Mitigation Measures MM-NOI-4** through **MM-NOI-8**, and adherence to **Standard Condition SC-NOI-1** would further reduce noise levels produced by the construction equipment to the nearby sensitive residential land uses. These will not be cumulative impacts.

To satisfy the 65 dBA CNEL exterior noise level standards for residential land use, **Mitigation Measure MM-NOI-2** shall be implemented. Impacts will be reduced to a less than significant level. There will be no cumulative impacts.

To satisfy the County's 45 dBA CNEL residential interior noise level standard, **Mitigation Measure MM-NOI-3** shall be implemented. On-site impacts will be reduced to a less than significant level. There will be no cumulative impacts.

Mitigation Measure MM-NOI-1, requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable, and area cumulative impact.

Paleontological Resources

According to the IS, the proposed Project site is mapped in the *General Plan* as having a "High Potential" for paleontological resources (fossils). This category encompasses lands for which previous field surveys and documentation demonstrates a high potential for containing significant paleontological resources subject to adverse impacts. As such, this Project is anticipated to require direct mitigation for paleontological resources. **Standard Condition SC-PAL-1** (Condition of Approval 060 – Planning-PAL), shall be implemented.

County Paleontological Report (PDP) No. 1596, submitted for this Project (TTM37439), was prepared by CRM Tech, Inc. and is entitled "Paleontological Resources Assessment Report, Tentative Tract Map Number 37439, in and near the City of Menifee, Riverside County, California", dated January 2, 2018 (**Appendix J**, of the Initial Study. Provided on CD at the back of this DEIR.).

PDP01596 concluded:

Based on the research results presented, the Project's potential to impact significant paleontological resources is determined to be low in the extensively disturbed, course-grained surface sediments but high in the relatively undisturbed, finer-grained, older Pleistocene sediments that are anticipated below the surface in most of the Project area.

PDP01596 recommended:

CRM TECH recommends that a paleontological resource impact mitigation program (PRIMP) be developed and implemented during the Project to prevent such impacts or reduce them to a level less than significant. The mitigation program should be developed in accordance with the provisions of CEQA as well as the proposed guidelines of the Society of Vertebrate Paleontology (2010).

PDP01596 satisfies the requirement for a Paleontological Resource Assessment for CEQA purposes. PDP01596 was accepted for TTM37439 in the Conditions of Approval. A PRIMP shall be required prior to issuance of a grading permit for this Project.

Standard Condition SC-PAL-1 is not considered unique mitigation under CEQA. Therefore, with adherence to **Standard Condition SC-PAL-1**, any Project impacts that could directly or indirectly destroy a unique paleontological resource, or site, or unique geologic features would be less than significant.

Population and Housing

The IS determined that the Project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere, or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income, displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, or affect a County Redevelopment Project Area. No impacts will occur. The IS also determined that the Project would have a less than significant impacts when it comes to cumulatively exceed official regional or local population projections. Project increases to population and households are incremental, and due to their small percentage in relation to the City and County, they are not considered substantial increases to population and households.

The residential population growth from the Project is not cumulatively considerable and is not a

significant adverse population or housing impact. The proposed Project may have a growth inducing impact on the community due to the Project's location, and the new infrastructure will that be built as part of this Project. Said infrastructure will contribute to extending improved services into the area. These improvements are what are envisioned under the long-range planning documents of the County, Riverside County Flood Control and Water Conservation District, and Eastern Municipal Water District. Therefore, these are not considered a significant cumulative impact. Indirect impacts from the installation of new infrastructure to serve the Project and the region, while anticipated under the General Plan, will be less than significant.

Public Services

Fire Services

According to the IS, as part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 services, are considered incremental, and less than significant.

Sheriff Services

According to the IS, as part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to sheriff services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for sheriff services will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for sheriff services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 sheriff services, are considered incremental, and less than significant.

Schools

According to the IS, implementation of the proposed Project will result in an incremental impact on the demand for school services. The Residential Project site components are located with the Menifee Union School District (MUSD), for kindergarten through 8th grades, and Perris Union High School District (PUHSD) for 9th-12th grades.

The following student generation factors are utilized by MUSD for single-family detached units:

- Elementary school: 0.3038/dwelling unit
- Middle school: 0.1396/dwelling unit

The following student generation factors are utilized by PUHSD for single-family detached units:

- High school: 0.1043/dwelling unit

Based on 574 residential units, the Project will generate the following approximate number of students:

- Elementary school: 175
- Middle school: 80
- High school: 60

Impacts to MUSD and PUHSD facilities will be offset through the payment of impact fees to the MUSD and PUHSD, prior to the issuance of a building permit. MUSD and PUHSD residential rates are currently $2.73 per square foot, and $1.09 per square foot, respectively. This fee is subject to change, and the applicable fees, at time of building permit issuance, shall apply.

Payment of these fees (**Standard Condition SC-PS-2**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. After payment of these fees, any impacts will be considered less than significant.

Libraries

According to the IS, library impacts are typically attributed to residential development. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for libraries will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for library services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

With payment of the DIF, any impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 library services, are considered less than significant.

Health Services

As discussed in the IS, the Project proposes 574 single-family residences and would have a build-out population of approximately 1,757 persons (based on 3.06 persons per single-family residential household). This increase in population to the Project area will create a need for additional health and medical services.
The Riverside County General Plan EIR states that impacts to medical facilities will be significant as a result of population increase. The following General Plan EIR Mitigation Measure (4.15.7A) was adopted with the County's General Plan in 2003 to aid in the reduction of significant impacts:
Mitigation Measure (4.15.7A):

> *Riverside County shall perform a periodic medical needs assessment to evaluate the current medical demand and level of medical service provided within each Area Plan. A periodic medical needs assessment shall be conducted every three years.*

As the County's population grows, new medical facilities will be required to provide health and medical services for an expanded population. Since the Project is consistent with the County's General Plan Land Use Plan designation of Community Development: Medium Density Residential (CD:MDR), the proposed Project's impact the County-wide health and medical facilities would be similar to what was anticipated in the County's General Plan.

Medical offices, urgent care clinics, local medical services, hospital beds and major facilities, such as trauma units and emergency rooms are available within proximity of the Project site. This fact, coupled with the Periodic Medical Needs Assessment, which is required by Mitigation Measure 4.15.7A of the County General Plan EIR, can ensure that adequate health and medical services are available to the Project residents. Based on this analysis, the potential impacts related to health services are considered less than significant.

Recreation

The Project is proposing to dedicate 8.96-acres to the County and develop on the land a community park with recreational facilities appropriate for "league" play. At 8.96-acres, the community park will exceed the 5 acres per 1,000-resident maximum and is consistent with Ordinance No. 460.

The Project will also include 25.81-acres of open space for the development of paseos, passive landscape areas, and perimeter landscaping, and will develop drainage basins on 7.23 acres. No parkland credit is requested for the open space or drainage basins as the dedication and construction of the 8.96-acre community park satisfies the requirements of Ordinance No. 460.

Implementation of the proposed Project in combination with cumulative projects in the area would increase the use of existing parks and recreation facilities. However, as future residential development is proposed, the County would require developers to provide the appropriate amount of parkland or pay the in-lieu fees, which would contribute to future recreational facilities. Payment of these fees and/or implementation of new parks on a project-by-project basis would offset cumulative parkland impacts by providing funding for new and/or renovated parks equipment and facilities, or new parks.

The cumulative impacts associated with development of the Project would be a less than significant impact to recreation resources and will not cause significant unavoidable adverse impacts to the area's recreation resources.

Transportation

According to the IS, the Project will have no impact that would result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; alter waterborne, rail or air traffic, or substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). Also, according to the IS, the Project would have a less than significant impact that would cause an effect upon, or a need for new or altered maintenance of roads, cause an effect upon circulation during the Project's construction (see **Standard Condition SC-TR-2**), or result in inadequate emergency access. Per the analysis above, the Project would have a less than significant impact resulting in a conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, or a conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities. No cumulative impacts will occur.

The proposed Project will contribute to the generation of additional traffic on local and regional roadways. The proposed Project is consistent with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable as well as cumulatively significant. In addition, the Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will also result in a significant cumulative impact.

Tribal Cultural Resources

All potential tribal cultural resources impacts would be limited and can be reduced to a less than significant impact level with adherence to **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to tribal cultural resources from implementing the Project as proposed. The Project tribal cultural resource impacts are less than significant.

Utilities and Service Systems

According to EMWD, there is an adequate water supply and sewer capacity, respectively, to meet the demand of the Project(s). Based on the analysis above, and in the referenced documentation, water and wastewater management systems are capable of meeting the cumulative demand for these systems. With adherence **Standard Conditions SC-USS-1** through **SC-USS-4**, and **SC-HYD-4**, impacts are considered less than significant. Thus, the Project will not cause cumulatively considerable significant adverse impacts on these systems. With implementation of the proposed stormwater management design, as outlined in **Standard Conditions SC-HYD-1** through **SC-HYD-3**, future stormwater runoff after development of the Project site will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the

construction of which could cause significant environmental effects, and is not forecast to make a cumulatively considerable contribution to downstream flood hazards in the Santa Ana River Watershed.

As discussed in the IS, cumulative impacts to landfill capacity will be less than significant due to the Project construction debris and operational waste representing a less than substantial cumulative increment. In addition, with adherence to **Standard Condition SC-PS-1**, for the maintenance of public facilities, including roads and other governmental services, any impacts will be less than significant and will not result in a significant cumulative impact.

Development proposed at the Project site would result in a permanent and continued use of electricity and natural gas resources. Sufficient power and distribution capabilities exist to provide electrical services to the proposed Project, but additional transmission capacity will be necessary to provide power to support the current and future cumulative growth in the vicinity. The proposed Project would contribute to the cumulative need for electricity the Project's cumulative contribution to impacts on the area electricity grid is considered to be less than significant.

As stated in the 2006 California Gas Report, SoCalGas projects that contribute to cumulative gas demand for residential meters will increase at an average annual rate of 1.3 percent from 2006 to 2025. When all market sectors are taken into account, average annual demand for natural gas is projected to occur at a rate of 0.15 percent over the same time period. For residential customers, use per meter is forecasted to decline due to the expected energy savings from higher building and appliance standards and energy efficiency programs**,** such as those required in the Project.

However, demand will be influenced by growth. By 2025, residential demand is expected to reach 279 Billion cubic feet (Bcf), an increase of 25 Bcf from 2005. Commercial and industrial market segments are also projected to decrease due to the California Public Utilities Commission authorized energy efficiency programs. Since the Project would: constitute only approximately 0.00010 percent of the residential customer base in 2004 and the proposed Project has been required to install Energy Star-rated models of appliances and would be served by existing and planned service and transmission lines within and around the project area, this Project's cumulative energy demand impacts are concluded to a less than significant impact.

To further reduce electricity demand, mitigation measures are provided to reduce overall energy consumption. **Mitigation Measure MM-GHG-1** will reduce the energy demand of the proposed Project. In addition, **Mitigation Measure MM-GHG-1** is designed to increase the water and energy efficiency of the buildings such that the per capita electrical demand of the residences would be substantially lower than in conventionally built homes.

With the incorporation of **Standard Conditions SC-USS-4** through **SC-USS-7**, impacts from electricity and natural gas are considered less than significant level and no cumulative impacts will result.

No significant and unavoidable impacts are anticipated to utilities and service system resources.

Energy

The proposed Project will result in an incremental use of energy during construction and operations. 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 conservations goals

within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

With implementation of **Mitigation Measure MM-GHG-1**, impacts would be reduced to a less than significant level. Project-related energy usage is not considered to be cumulatively considerable and will not result in an unavoidable significant adverse impact.

Wildfire

The Project will change the land use on the Project site and create a potential for certain adverse impacts regarding wildfire issues both during construction and occupancy. There will be some adverse impacts as a result of implementing the Project. However, adherence to **Standard Conditions SC-HAZ-1**, **SC-PS-1**, and **SC-TR-2**, these potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level for wildfire issues. Thus, the Project is not forecast to cause any unavoidable significant adverse wildfire impacts. The Project wildfire impacts are less than significant and will not be considered cumulatively considerable.

5.2 NO PROJECT ALTERNATIVE (NPA)

5.2.1 Overview of the NPA

The NPA is required under CEQA to evaluate the environmental effects associated with no action on the part of the Lead Agency. The NPA assumes the property remains in its current state – vacant land with agricultural or residential uses.

Aesthetic Resources

The NPA would not result in any change to the current aesthetics of the Project site. Therefore, aesthetic impacts from the NPA would be less than those of the proposed Project.

Agriculture and Forest Resources

Under the NPA all existing agricultural uses would remain. There would be no conversion of the approximate 158.18 acres to urban/suburban residential uses. The NPA alternative has no impact on agriculture/forest resources, which is less than the proposed Project.

Air Quality

Since no construction activity would occur, the NPA would not have any short-term impacts on air quality other than that caused by ongoing agricultural operations, which occasionally generates fugitive dust from plowing the field for planting and harvesting operations. Also, no new long-term sources of air pollution would result from increased traffic or increased use of energy resources at the site.

Overall, air quality emissions from the NPA would be less than those of the proposed Project and an unavoidable significant adverse impact would be eliminated under this alternative.

Biological Resources

The NPA would not result in a change to the existing biology of the Project site. The NPA would have less overall impact to biological resources than the proposed Project, but neither alternative would have any significant biological resource impacts.

Cultural Resources

The NPA would not result in a change to the existing cultural resources of the Project site and would not introduce large numbers of people into the area which can cause indirect impacts to cultural resources. Therefore, based on this information, the NPA would have less overall impact to cultural resources than the proposed Project, but neither alternative would have any significant cultural resource impacts.

Geology and Soils

The NPA would not involve additional development on the site; therefore, no people or structures are subject to onsite geological constraints. The NPA reduces overall risk to structures and future residents, but neither alternative would have any significant geology and soil impacts.

Greenhouse Gas Emissions

Since no construction activity would occur, the NPA would not have any short-term impacts on Greenhouse Gas (GHG) emissions. No new permanent sources of GHG emissions would result from increased traffic or increased use of energy resources at the site. Overall, GHG emissions from the NPA would be substantially less than those of the proposed Project but neither alternative would have any significant GHG emission impacts.

Hazards and Hazardous Materials

Historic agricultural use of the Project site included the use of pesticides. With on-going agricultural uses, there is no need to mitigate any impacts due to changes in land use. Therefore, hazards and hazardous materials resources impacts from the NPA would be less than those of the proposed Project.

Hydrology and Water Quality

Under the NPA, the existing site would not be converted to residential and recreational uses. The current hydrology would remain the same; however, pollutants are not being treated on site and runoff can exit the site untreated. In addition, the proposed drainage improvements will provide a benefit to the existing hydrology in the area. Therefore, hydrology/water quality resources (primarily water quality) resources impacts from the NPA would be greater than those of the proposed Project.

Land Use and Planning

Under the NPA, the existing potential for agricultural uses on site would remain and the current land use designation of AG would remain unchanged. The Project site would not be converted to residential, recreational and drainage uses. Therefore, land use/planning impacts from the NPA would be less than those of the proposed Project.

Mineral Resources

Since there are no mineral resources on the Project site, neither implementation of the NPA or the proposed Project has any potential to cause adverse impacts to such resources.

Noise

Since no construction activity would occur, the NPA would not generate any short- or long-term construction noise impacts. Also, there would be no change from the agricultural uses those included with the Project during operations. Noise impacts from the NPA would be substantially less than those of the proposed Project.

Paleontological Resources

The NPA would not result in a change to the existing paleontological resources of the Project site and would not introduce large numbers of people into the area which can cause indirect impacts to paleontological resources. Therefore, based on this information, the NPA would have less overall impact to paleontological resources than the proposed Project, but neither alternative would have any significant paleontological resource impacts.

Population and Housing

With the NPA, none of the 574 residential buildings would be built, and the projected population increase in the local area from the proposed Project would not occur. The effects of the NPA are substantially less than the proposed Project.

Public Services

Fire and Sheriff Services

The NPA would not result in the creation of additional demand for sheriff and fire department services. Neither alternative would cause a significant impact on fire and sheriff services but impacts from the NPA would be substantially less than the proposed Project.

Schools

The NPA would not result in the creation of additional demand for school capacity. Neither alternative would cause a significant impact on school system services but impacts from the NPA would be substantially less than the proposed Project.

Libraries

The NPA would not create any additional demand upon existing library services within the Project area. No Riverside County development impact fees for libraries would be generated. Neither alternative would cause significant impacts on library services, but the NPA impact would be less than that of the proposed Project.

Health Services

The NPA would not result in the creation of additional demand for health services. Neither alternative would cause a significant impact on health services but impacts from the NPA would be substantially less than the proposed Project.

Recreation

Under the NPA, no additional demand for parks, trails, and recreation facilities would be created. Recreation impacts from the NPA when compared to the proposed Project would be less.

Transportation

The NPA would not increase site-generated traffic above current levels and therefore, would not contribute to the need for area-wide off-site road improvements. Transportation impacts from the NPA would be substantially less than those of the proposed Project.

Tribal Cultural Resources

The NPA would not result in a change to the existing tribal cultural resources of the Project site. Tribal cultural resources impacts from the NPA would be less than those of the proposed Project.

Utilities and Service Systems

Water and Sewer

The NPA will continue to function as agricultural uses. Water and sewer resources impacts from the NPA would be less than those of the proposed Project, but neither alternative would cause a significant adverse impact to these utility systems.

Solid Waste

The NPA would not create an increase in the amount of solid waste generated on the Project site beyond what is currently being generated. Solid waste resources impacts from the NPA would be less than those of the proposed Project.

Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services

The NPA will continue to function as agricultural uses. No increase in demand or usage will occur under the NPA. The resources impacts from the NPA would be less than those of the proposed Project, but neither alternative would cause a significant adverse impact to these utility and service systems.

Energy

The NPA would not involve additional development on the site; therefore, no additional energy consumption would occur. Therefore, based on this information, the NPA would have less overall impact to energy resources than the proposed Project

Wildfire

The NPA will continue to function as agricultural uses. No additional exposure of people to wildfire hazards will occur under the NPA. The wildfire impacts from the NPA would be less than those of the proposed Project.

5.2.2 Summary of the NPA

With respect to the NPA, Project objectives are not attained because no development is included as a part of the NPA. With respect to the significant unavoidable impacts of Project, the NPA would avoid the unavoidable significant impacts of the Project; however, no fees and funding would be provided to upgrade regional transportation infrastructure, public services, and utilities. Reference **Table 5-1, *Tabular Comparison of Project Alternatives***.

5.3 REDUCED PROJECT INTENSITY ALTERNATIVE (RPIA)

5.3.1 Overview of the RPIA

Under the RPIA the entirety of the Project would be developed at the low end of the density range for Medium Density Residential (2-5 dwelling units/acre) General Plan Land Use Designation. In total, 316 dwelling units would be allowed under the RPIA (158 acres x 2 dwelling units/acre). This is a decrease of 258 dwelling units on the Project site, when compared to the proposed Project.

Aesthetic Resources

The RPIA will change the existing visual setting of the Project site, consistent with the Project (just at a lower density/intensity). Aesthetic impacts from the RPIA would be similar to those of the proposed Project.

Agriculture and Forest Resources

The RPIA, like the proposed Project will convert approximately 158.18 acres of the Residential Project site components to more intense urban/suburban uses. The RPIA alternative has similar impacts to agriculture/forest resources as the proposed Project.

Air Quality

The RPIA will result in construction and operational emissions. It is anticipated that these emissions will be approximately 45% lower that the proposed Project, due to the reduction in overall units. Since over 84 percent of the Project's NO_x emissions are derived from vehicle usage. VOC emissions are derived from consumer products - cleaning supplies, kitchen aerosols, cosmetics and toiletries would also be reduced. As shown on DEIR Table 4.4-9, Maximum Daily Operational Emissions Summary, for the worst-case scenario (Phase 1 and Phase 2) for VOC emissions for the Project is 135.75 and 94.26 for NO_x. At a 45% reduction for VOC, the threshold would still be exceeded, but would be lower than the Project's emissions. At a 45% reduction for NO_x, the threshold would not be exceeded, and would be lower than the Project's emissions. These reductions will result in lesser emissions, and therefore, could reduce the significant and unavoidable impacts for NO_x. Therefore, air quality emissions from the RPIA would be less than those of the proposed Project.

Biological Resources

The RPIA would change the existing biology of the Project site in a manner comparable to the propose Project. The RPIA would have similar overall impact to biological resources than the proposed Project, but neither alternative would have any significant biological resource impacts.

Cultural Resources

The RPIA would have similar overall impact to cultural resources than the proposed Project, but neither alternative would have any significant cultural resource impacts.

Geology and Soils

The RPIA would involve residential development on the site at a low density than the proposed Project (45% lower that the proposed Project, due to the reduction in overall units); therefore, fewer structures and people under this alternative are subject to onsite geological constraints. The RPIA

reduces overall risk to structures and future residents, but neither alternative would have any significant geology and soil impacts.

Greenhouse Gas Emissions

The RPIA would also generate new permanent sources of GHG emissions from increased traffic or increased use of energy resources at the site; however, this will be at a lower rate than the proposed Project (45% lower that the proposed Project, due to the reduction in overall units). Overall, GHG emissions from the RPIA would be less than those of the proposed Project, due to the reduced number of overall units, but neither alternative would have any significant GHG emission impacts.

Hazards and Hazardous Materials

Historic agricultural use of the Project site included the use of pesticides. It is assumed that under the RPIA, any remediation shall occur, similar to the proposed Project. Therefore, hazards and hazardous materials resources impacts from the RPIA would be similar to those of the proposed Project.

Hydrology and Water Quality

Under the RPIA, the existing hydrology on site would have to be altered as the Project site would be converted to residential and drainage uses. Therefore, hydrology/water quality resources impacts from the RPIA would be similar to those of the proposed Project.

Land Use and Planning

The Project is consistent with the General Plan Land Use Designation of MDR and EDR. Under the RPIA, no change of zone would be required. The RPIA could be implemented under the R-1 zoning classification. Land use/planning impacts from the RPIA would be less than those of the proposed Project.

Mineral Resources

As described in the IS, the Project site and surrounding area do not contain any existing mineral development or any identified potential for mineral resource development. Based on these data, the proposed Project has no potential to cause any unavoidable adverse impact to mineral resources or values in Riverside County. Mineral resources impacts from the RPIA would be similar to those of the proposed Project.

Noise

Since construction activity would occur under the RPIA, it would generate both short- and long-term construction noise impacts. It is anticipated noise impacts during construction would be similar to the Project during construction. During operations, it is anticipated that noise impacts would be reduced, due to the 45% reduction in units. This will translate to fewer cars and lower off-site noise impacts. There is a potential that significant and unavoidable impacts may be eliminated under the RPIA. Therefore, noise impacts from the RPIA would be slightly less than those of the proposed Project due to the reduced number of overall units.

Paleontological Resources

The RPIA would have the same general impacts to paleontological resources as the proposed Project. The RPIA would have similar overall impact to paleontological resources than the proposed Project, but neither alternative would have any significant paleontological resource impacts.

Population and Housing

With the RPIA, 316 residential buildings would be built, and the projected population would increase in the local area by approximately 948. Due to the reduced number in overall units compared to the proposed Project, the effects of the RPIA are less than the proposed Project. Impacts would be less than significant.

Public Services

Fire and Sheriff Services
The RPIA would result in the creation of additional demand for sheriff and fire department services due to the development of 316 single-family residences. Neither alternative would cause a significant impact on fire and sheriff services but impacts from the RPIA would be less than the proposed Project, due to the reduced number of units.

Schools

The RPIA would result in the creation of additional demand for school capacity due to the development of 316 single-family residences. Neither alternative would cause a significant impact on school system services but impacts from the RPIA would be less than the proposed Project, due to the reduced number of units.

Libraries

The RPIA would create any additional demand upon existing library services within the Project area due to the development of 316 single-family residences. Neither alternative would cause significant impacts on library services, but the RPIA impact would be less than that of the proposed Project.

Health Services

The RPIA would create any additional demand upon existing library services within the Project area due to the development of 316 single-family residences. Neither alternative would cause significant impacts on library services, but the RPIA impact would be less than that of the proposed Project, due to the reduced number of overall units.

Recreation

The RPIA would create additional demand for parks, trails, and recreation facilities due to the development of 316 single-family residences. Recreation impacts from the RPIA when compared to the proposed Project would be less, due to the reduced number of overall units.

Transportation

The RPIA would generate both construction and future occupancy due to the development of 316

single-family residences. Transportation resources impacts from the RPIA would be less than those of the proposed Project, due to the reduced number of overall units.

Tribal Cultural Resources

The RPIA would result in a change to the existing tribal cultural resources of the Project site due to the development of 316 single-family residences. The RPIA would have similar overall impact to tribal cultural resources than the proposed Project, but neither alternative would have any significant tribal cultural resource impacts.

Utilities and Service Systems

Water and Sewer

The RPIA will result in additional use of water due to the development of 316 single-family residences. Water and sewer resources impacts from the RPIA would be less than those of the proposed Project, due to the reduced number of overall units.

Solid Waste

The RPIA would create an increase in the amount of solid waste generated on the Project site due to the development of 316 single-family residences. Solid waste resources impacts from the RPIA would be less than those of the proposed Project due to the reduced number of overall units.

Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services

The RPIA would create an increase in the amount of solid waste generated on the Project site due to the development of 316 single-family residences. Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services resources impacts from the RPIA would be less than those of the proposed Project due to the reduced number of overall units.

Energy

The RPIA would involve residential development on the site at a low density than the proposed Project (45% lower that the proposed Project, due to the reduction in overall units); therefore, fewer energy resources would be consumed during construction and operations. The RPIA reduces energy consumption, but neither alternative would have any significant geology and soil impacts.

Wildfire

The RPIA would expose people to wildfire risks due to the development of 316 single-family residences. Neither alternative would cause a significant impact due to wildfires but impacts from the RPIA would be less than the proposed Project, due to the reduced number of units.

5.3.2 Summary of the RPIA

With respect to the RPIA, the reduced number of units has a comparable negative effect on the ability of the Project to meet overall development (i.e., development feasibility) and certain Project objectives may not be attained, because certain improvements and other infrastructure improvements may not be feasible.

Regardless, development of the RPIA would result in comparable or less impact for all environmental issues that the proposed Project. Reference **Table 5-1, *Tabular Comparison of Project Alternatives***.

5.4 SUBSURFACE DRAINAGE ALTERNATIVE (SDA)

5.4.1 Overview of the SDA

Under the SDA, all earthen channels utilized for the Project shall be undergrounded in concrete reinforced pipes. This would include the Residential Project site components, as well as the Off-site Project components. This alternative assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes.

Aesthetic Resources

The SDA will change the existing visual setting of the Project site, consistent with the Project. Construction aesthetic impacts from the SDA will be similar to those of the Project. Upon completion, the aesthetic of the completed drainage project will be one of an area that has limited tree cover due to the undergrounding of the pipes. It is anticipated that the aesthetic impacts from the SDA would be less than to those of the proposed Project due to a potentially smaller overall disturbance/easement footprint.

Agriculture and Forest Resources

The SDA, like the proposed Project, will convert approximately 158.18 acres of the Residential Project site components to more intense urban/suburban uses. This would not change. The drainage facilities would also impact agriculture resources; however, due to a potentially smaller overall disturbance/easement footprint, the impacts from the SDA would be less than the proposed Project.

Air Quality

For the purposes of this analysis, it will be assumed that the amount of construction equipment and duration will be similar between the SDA and the Project. Therefore, air quality emissions from the SDA would be similar to those of the proposed Project.

Biological Resources

The SDA would change the existing biology of the Project site in a manner comparable to the propose Project. The SDA would have similar overall impact to biological resources than the proposed Project, but neither alternative would have any significant biological resource impacts.

Cultural Resources

The SDA would have similar overall impact to cultural resources than the proposed Project, but neither alternative would have any significant cultural resource impacts.

Geology and Soils

Because the Project would involve an earthen channel, the construction parameters for the SDA would be more stringent to address geology and soils. Therefore, the SDA would have a greater geology and soil impacts than the Project.

Greenhouse Gas Emissions

For the purposes of this analysis, it will be assumed that the amount of construction equipment and duration will be similar between the SDA and the Project. Therefore, impacts to greenhouse gas emissions would be similar between the SDA and the Project.

Hazards and Hazardous Materials

Historic agricultural use of the Project site included the use of pesticides. It is assumed that under the SDA, any remediation shall occur, similar to the proposed Project. Therefore, hazards and hazardous materials resources impacts from the SDA would be similar to those of the proposed Project.

Hydrology and Water Quality

Under the SDA, the existing hydrology on site would have to be altered as the Project site would be converted to residential and drainage uses. As discussed above, the SDA assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. Therefore, hydrology/water quality resources impacts from the SDA would be similar to those of the proposed Project.

Land Use and Planning

The Project is consistent with the General Plan Land Use Designation of MDR and EDR. Land use/planning impacts from the SDA would be similar to those of the proposed Project.

Mineral Resources

As described in the IS, the Project site and surrounding area do not contain any existing mineral development or any identified potential for mineral resource development. Based on these data, the proposed Project has no potential to cause any unavoidable adverse impact to mineral resources or values in Riverside County. Mineral resources impacts from the SDA would be similar to those of the proposed Project.

Noise

The facilities under the SDA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes. Therefore, any impacts from noise from the SDA would be similar to those as the Project.

Paleontological Resources

The facilities under the SDA will be designed for the same function and have the same capacity as

the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes. Therefore, any impacts to paleontological resources from the SDA would be similar to those as the Project.

Population and Housing

There will be no changes to population/housing under the SDA. Therefore, any impacts to population/housing resources from the SDA would be similar to those as the Project.

Public Services

Fire and Sheriff Services

There will be no changes to the needs for fire and sheriff services under the SDA. Therefore, any impacts to fire and sheriff services from the SDA would be similar to those as the Project.

Schools

There will be no changes to the needs for schools under the SDA. Therefore, any impacts to schools from the SDA would be similar to those as the Project.

Libraries

There will be no changes to the needs for libraries under the SDA. Therefore, any impacts to libraries from the SDA would be similar to those as the Project.

Health Services

There will be no changes to the needs for health services under the SDA. Therefore, any impacts to health services from the SDA would be similar to those as the Project.

Recreation

There will be no changes to the needs for recreation under the SDA. Therefore, any impacts to recreation from the SDA would be similar to those as the Project.

Transportation

The facilities under the SDA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes. Therefore, any impacts to transportation resources from the SDA would be similar to those as the Project.

Tribal Cultural Resources

The SDA would have similar overall impact to tribal cultural resources than the proposed Project, but neither alternative would have any significant tribal cultural resource impacts.

Utilities and Service Systems

Water and Sewer

There will be no changes to the needs for water and sewer under the SDA. Therefore, any impacts to water and sewer from the SDA would be similar to those as the Project.

Solid Waste

The facilities under the SDA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes. Therefore, any impacts to solid waste resources from the SDA would be similar to those as the Project.

Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services

The facilities under the SDA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the pipes. Therefore, any impacts to Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services resources from the SDA would be similar to those as the Project.

Energy

The SDA would have similar overall impact to energy consumption than the proposed Project, but neither alternative would have any significant energy consumption impacts.

Wildfire

The SDA would have similar overall impact to wildfires than the proposed Project, but neither alternative would have any significant wildfire impacts.

5.4.2 Summary of the SDA

As discussed in 5.5.1, the SDA will primarily have similar impacts to the Project in most issue areas. However, the SDA will result in fewer impacts to aesthetics and agriculture and forestry resources. Lastly, the SDA will result in greater impacts to geology and soils resources. Reference **Table 5-1, *Tabular Comparison of Project Alternatives***.

5.5 CONCRETE CULVERT ALTERNATIVE (CCA)

5.5.1 Overview of the CCA

Under the CCA, all earthen channels utilized for the Project shall be contained within concrete culverts. This would include the Residential Project site components, as well as the Off-site Project components. This alternative assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities

will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the culverts; however, it will have a slightly larger development footprint than the SDA.

Aesthetic Resources

The CCA will change the existing visual setting of the Project site, consistent with the Project. Construction aesthetic impacts from the CCA will be similar to those of the Project. Upon completion, the aesthetic of the completed drainage project will be one of an area that has limited tree cover due to the undergrounding of the culverts. It is anticipated that the aesthetic impacts from the CCA would be less than to those of the proposed Project due to a potentially smaller overall disturbance/easement footprint.

Agriculture and Forest Resources

The CCA, like the proposed Project will convert approximately 158.18 acres of the Residential Project site components to more intense urban/suburban uses. This would not change. The drainage facilities would also impact agriculture resources; however, due to a potentially smaller overall disturbance/easement footprint, the impacts from the CCA would be less than the proposed Project.

Air Quality

For the purposes of this analysis, it will be assumed that the amount of construction equipment and duration will be similar between the CCA and the Project. Therefore, air quality emissions from the CCA would be similar to those of the proposed Project.

Biological Resources

The CCA would change the existing biology of the Project site in a manner comparable to the propose Project. The CCA would have similar overall impact to biological resources than the proposed Project, but neither alternative would have any significant biological resource impacts.

Cultural Resources

The CCA would have similar overall impact to cultural resources than the proposed Project, but neither alternative would have any significant cultural resource impacts.

Geology and Soils

Because the Project would involve an earthen channel, the construction parameters for the CCA would be more stringent to address geology and soils. Therefore, the CCA would have a greater geology and soil impacts than the Project.

Greenhouse Gas Emissions

For the purposes of this analysis, it will be assumed that the amount of construction equipment and duration will be similar between the CCA and the Project. Therefore, impacts to greenhouse gas emissions would be similar between the CCA and the Project.

Hazards and Hazardous Materials

Historic agricultural use of the Project site included the use of pesticides. It is assumed that under the CCA, any remediation shall occur, similar to the proposed Project. Therefore, hazards and hazardous materials resources impacts from the CCA would be similar to those of the proposed Project.

Hydrology and Water Quality

Under the CCA, the existing hydrology on site would have to be altered as the Project site would be converted to residential and drainage uses. As discussed above, the CCA assumes that these facilities will be designed for the same function and have the same capacity as the facilities proposed with the Project. Therefore, hydrology/water quality resources impacts from the CCA would be similar to those of the proposed Project.

Land Use and Planning

The Project is consistent with the General Plan Land Use Designation of MDR and EDR. Land use/planning impacts from the CCA would be similar than those of the proposed Project.

Mineral Resources

As described in the IS, the Project site and surrounding area do not contain any existing mineral development or any identified potential for mineral resource development. Based on these data, the proposed Project has no potential to cause any unavoidable adverse impact to mineral resources or values in Riverside County. Mineral resources impacts from the CCA would be similar to those of the proposed Project.

Noise

The facilities under the CCA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the culverts. Therefore, any impacts from noise from the CCA would be similar to those as the Project.

Paleontological Resources

The facilities under the CCA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the culverts. Therefore, any impacts to paleontological resources from the CCA would be similar to those as the Project.

Population and Housing

There will be no changes to population/housing under the CCA. Therefore, any impacts to population/housing resources from the CCA would be similar to those as the Project.

Public Services

Fire and Sheriff Services

There will be no changes to the needs for fire and sheriff services under the CCA. Therefore, any impacts to fire and sheriff services from the CCA would be similar to those as the Project.

Schools

There will be no changes to the needs for schools under the CCA. Therefore, any impacts to schools from the CCA would be similar to those as the Project.

Libraries

There will be no changes to the needs for libraries under the CCA. Therefore, any impacts to libraries from the CCA would be similar to those as the Project.

Health Services

There will be no changes to the needs for health services under the CCA. Therefore, any impacts to health services from the CCA would be similar to those as the Project.

Recreation

There will be no changes to the needs for recreation under the CCA. Therefore, any impacts to recreation from the CCA would be similar to those as the Project.

Transportation

The facilities under the CCA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the culverts. Therefore, any impacts to transportation resources from the CCA would be similar to those as the Project.

Tribal Cultural Resources

The CCA would have similar overall impact to tribal cultural resources than the proposed Project, but neither alternative would have any significant tribal cultural resource impacts.

Utilities and Service Systems

Water and Sewer

There will be no changes to the needs for water and sewer under the CCA. Therefore, any impacts to water and sewer from the CCA would be similar to those as the Project.

Solid Waste

The facilities under the CCA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same

general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the culverts. Therefore, any impacts to solid waste resources from the CCA would be similar to those as the Project.

Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services

The facilities under the CCA will be designed for the same function and have the same capacity as the facilities proposed with the Project. In addition, these facilities will be located in the same general area as depicted in the Project. Lastly, it is anticipated that this development scenario would result in a smaller disturbance/easement footprint than the Project due to the more concentrated flow/capacity design of the culverts. Therefore, any impacts to Electricity, Natural Gas, Communication Systems, Storm Water Drainage, Street Lighting, Maintenance of public facilities, including roads, and Other governmental services resources from the CCA would be similar to those as the Project.

Energy

The CCA would have similar overall impact to energy consumption than the proposed Project, but neither alternative would have any significant energy consumption impacts.

Wildfire

The SDA would have similar overall impact to wildfires than the proposed Project, but neither alternative would have any significant wildfire impacts.

5.5.2 Summary of the CCA

As discussed in 5.6.1, the CCA will primarily have similar impacts to the Project in most issue areas. However, the CCA will result in fewer impacts to aesthetics and agriculture and forestry resources. Lastly, the CCA will result in greater impacts to geology and soils resources. As it pertains to the SDA versus the CCA, both appear to be similar in terms of their respective impacts in relation to each other, and in relation to the Project. Reference **Table 5-1, *Tabular Comparison of Project Alternatives***.

5.6 DISCUSSION OF ALTERNATIVES TO THE PROPOSED PROJECT

Of the four alternatives considered, the NPA alternative has been determined to be the environmentally superior alternative. Refer to the comparison of alternatives in the matrix provided in **Table 5-1, *Tabular Comparison of Project Alternatives***.

The NPA was evaluated and was also determined to be an environmentally superior alternative to the proposed Project, with the exception of mineral resources. It is unlikely that the NPA is feasible, however, since it would not meet the Project objectives and retention of the current agriculture use within the Project area will be difficult due to the changes in land use occurring within the Project area.

The RPIA has been evaluated as being an environmentally superior, feasible alternative. However, it does not meet the majority of the Project objectives summarized above. With respect to the RPIA, the reduced number of units has a comparable negative effect on the ability of the Project to meet Project costs (i.e., development feasibility) and essential Project objectives may not be attained, because certain improvements, and other infrastructure improvements may not be

feasible.

The SDA and CCA were evaluated to determine if either of these alternatives provided an environmentally superior alternative to the Project. Both the SDA and the CCA will primarily have similar impacts to the Project in most issue areas. Both will result in fewer impacts to aesthetics and agriculture and forest resources. Lastly, both will result in greater impacts to geology and soils resources. As it pertains to the SDA versus the CCA, both appear to be similar in terms of their respective impacts in relation to each other, and in relation to the Project.

Table 5-1
TABULAR COMPARISON OF PROJECT ALTERNATIVES

Replace	*Would the Project/Alternative Result in Significant Adverse Impacts to the Resource Issues of …?*					
	Proposed Project	**No Project Alternative (NPA)**	**Reduced Project Intensity Alternative (RPIA)**	**Subsurface Drainage Alternative (SDA)**	**Concrete Culvert Alternative (CCA)**	**Which Alternative is Environmentally Superior?**
Aesthetics	No	No (**L**)	No (**E**)	No (**L**)	No (**L**)	NPA
Agriculture and Forest Resources	No	No (**L**)	No (**E**)	No (**L**)	No (**L**)	NPA
Air Quality	**Yes**	No (**L**)	Yes (**L**)	**Yes** (**E**)	**Yes** (**E**)	NPA and RPIA
Biological Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Cultural Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Geology and Soils	No	No (**L**)	No (**L**)	No (**G**)	No (**G**)	NPA
Greenhouse Gas Emissions	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Hazards and Hazardous Materials	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Hydrology and Water Quality	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Land Use and Planning	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Mineral Resources	No	No (**E**)	No (**E**)	No (**E**)	No (**E**)	Alternatives are equal
Noise	**Yes**	No (**L**)	No (**L**)	**Yes** (**E**)	**Yes** (**E**)	NPA
Paleontological Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Population and Housing	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Public Services	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Recreation	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Transportation	**Yes**	No (**L**)	**Yes** (**E**)	No (**E**)	No (**E**)	NPA
Tribal Cultural Resources	No	No (**L**)	No (**E**)	No (**E**)	No (**E**)	NPA
Utilities and Service Systems	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Energy	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Wildfire	No	No (**L**)	No (**L**)	No (**E**)	No (**E**)	NPA
Would Meet Project Objectives?	**Yes**	No	No	**Yes**	**Yes**	Proposed Project, SDA and CCA

Legend: **L**= Impact is less than the Project.
E = Impact is equal to the Project.
G = Impact is greater than the Project.

CHAPTER 6 – TOPICAL ISSUES

Each environmental document contains a certain amount of duplication to ensure that information is conveyed to the decision-makers and interested members of the public in an organized fashion. Chapter 4 contains a detailed discussion of environmental effects that may result from implementing the proposed Project. This includes a discussion of project specific and cumulative environmental impacts, as well as discussion of unavoidable adverse impacts for each topic evaluated in the Environmental Impact Report (EIR). This chapter of the EIR combines three "topical issues" that are mandated in the State CEQA Guidelines Section 15126. Section 15126 states: "The subjects listed below shall be discussed...preferably in separate sections or paragraphs of the EIR." These sections are: (c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented and (d) Growth-Inducing Impact of the Proposed Project. Section 15130 requires a discussion of Cumulative Impacts. Because of the importance of this topic, a summary of cumulative effects is included in this Chapter. The other major topics required in an EIR (Significant Environmental Effects; Unavoidable Significant Environmental Effects; and Mitigation Measures) are specifically addressed in Chapter 4 of this EIR. Alternatives to the proposed Project are evaluated in Chapter 5.

6.1 GROWTH-INDUCING IMPACTS

CEQA requires a discussion of the ways in which a project could be growth inducing. (Pub. Resources Code, §21100, subd.(b)(5); CEQA Guidelines, §§15126, subd.(d), 15126.2, subd.(d)) 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. Under CEQA, growth inducement is not considered necessarily detrimental or beneficial. (CEQA Guidelines §15126.2, subd.(d)).

A project may indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. Projects that induce growth directly would include commercial or industrial development that hire new employees and residential development that provides housing. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in an area. Growth inducement may also occur if a project provides infrastructure or service capacity that accommodates growth beyond the levels currently permitted by local or regional land use plans. However, a project's potential to induce growth does not automatically result in growth. Growth only happens when the private or public sector responds to a change in the underlying development potential of an area with capital investment.

Typically, significant growth is induced in one of three ways. In the first instance, a project developed in an isolated area may bring sufficient urban infrastructure to cause new or additional development pressure on the intervening and surrounding land. This type of induced growth leads to conversion of adjacent acreage to higher intensity uses, either unexpectedly or through accelerated development. This conversion occurs because the adjacent land becomes more suitable for development and, hence, more valuable because of the availability of the new infrastructure. This type of growth inducement is termed "leap frog" or "premature" development because it creates an island of higher intensity developed land within a larger area of lower intensity land use.

The second type of significant growth inducement is caused when development of a large-scale project, relative to the surrounding community or area, produces a "multiplier effect" resulting in substantial indirect community growth, although not necessarily adjacent to the development site

or of the same type of use as the project itself. This type of stimulus to community growth is typified by the development of major destination facilities, such as Disney World near Orlando, Florida, or around military facilities, such as the Marine Corps Air Ground Combat Center, near Twenty-nine Palms.

A third, and subtler, type of significant growth inducement occurs when land use plans are established that create a potential for growth, because the available land and the land uses permitted result in the attraction of new development. This type of growth inducement is also attributed to other plans developed to provide the infrastructure necessary to meet the land use objectives, or community vision, contained in the governing land use agency's general plan. In this type of growth inducement, the ultimate vision of future growth and development within a project area is established in the County or City General Plan or other comprehensive land use plan. The net effect of a General Plan's land use designations is to establish a set of expectations regarding future land use and growth that may or may not occur in the future, depending upon the actual demand and other circumstances when development is proposed. Thus, a plan may assign a particular area 100,000 square feet of commercial space, but if actual development does not ultimately generate demand for this much retail square footage, it will never be established.

New infrastructure will be built as part of this Project which will contribute to extending improved services into the area. Suburbanization of the Project site could potentially influence the timing of development of adjacent properties by providing or extending roadways, water and sewer service, and other utility services (infrastructure) to the immediate area. This could eliminate potential constraints for future development in this area of the County. New streets within the Project site are proposed that will connect to roadways that will be improved (Holland Road, Eucalyptus Road, Craig Avenue and Leon Road). The roadway improvements are expected to be incremental and should beneficially impact the overall traffic conditions in the area anticipated from the Project; but this itself is an inducement to growth, i.e., enhanced access to the Project area. These improvements will have an indirect impact to population growth within the immediate area by extending and/or increasing capacity of the existing roadways, thus eliminating one of the constraints to growth in the area. The growth overall population growth was anticipated in the General Plan.

Currently, potable water in the vicinity of the Project site is provided by private wells on individual properties, by Eastern Municipal Water District (EMWD). Water service exists adjacent to the Project site; however, additional water distribution facilities will be necessary to serve the proposed development.

Existing EMWD sewer facilities do not extend to proposed Project site. The lack of sewer service within this area currently limits development. Therefore, extension of new sewer service facilities to the Project area is required. The addition of sewer lines and service into the Project area are sized to meet the growth projections of EMWD. This infrastructure improvement eliminates existing sewer constraints and will make it much easier to propose residential development at higher densities (anticipated under the General Plan) within the Project vicinity. Any increase in density or change in land use on nearby parcels would require a separate environmental review. However, these improvements contribute significantly to eliminating constraints to development, thus making the Project growth inducing relative to the existing rural environment.

The proposed infrastructure improvements have the potential to facilitate development of undeveloped parcels in the immediate vicinity of the site, thus the Project may indirectly induce population growth. Therefore, this impact is considered significant under this evaluation criterion.

The Project will install off-site flood control facilities, including Menifee Valley Drainage Plan/Area

Drainage Plan (MDP/ADP) improvements, which will remove drainage limitations that currently exist for property surrounding the Project site.

The MDP/ADP improvements to be constructed by the Project have been sized to meet regional drainage demands. The installation of the MDP/ADP improvements by the Project will remove drainage limitations that currently exist for properties in the Project area and will result in a potentially significant impact to population.

Based on this information, direct impacts from the homes developed by the Project will be less than significant.

The indirect effects from the Project infrastructure extensions and improvements (roadways, sewer and drainage), while anticipated under the General Plan, will be significant and unavoidable.

6.2 CUMULATIVE IMPACTS

The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contribution to area-wide or community environmental impacts when added to other development occurring in the region. Typically, cumulative impacts are discussed in relation to a list of past, present, and reasonably anticipated projects, or in relation to broad growth projections and related area-wide impacts identified in general (County General Plan) or regional plans (such as, SCAQMD's Air Quality Management Plan, AQMP) refer to Section 15130(b) of the State CEQA Guidelines). For the proposed Project, cumulative impacts are evaluated in the context of both types of cumulative impact forecasts. The cumulative impact projections were made using regional planning documents and site-specific technical studies. Cumulative impacts are discussed in each issue subchapter of Chapter 4 in this document. The following is a summary of cumulative impacts that are forecast to occur if the proposed Project is implemented as proposed. This information is a restatement of the cumulative impacts from Chapter 4.

Aesthetics

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently occurs on the site or in the surrounding vicinity. However, this change was anticipated under the General Plan Land Use Plan. The General Plan EIR (Section 4.4.3) states:

> "*Build out of the proposed General Plan would result in a substantial increase in urban uses throughout the proposed General Plan area. The development of structures and facilities would occur on vacant properties within unincorporated areas of the County and would be consistent with the policies outlined in the proposed General Plan. Similarly, the replacement, expansion, or refurbishment of existing development would occur pursuant to the proposed General Plan policies...*"
>
> and concludes:
>
> "*The proposed General Plan includes policies that will: concentrate growth near or within existing urban and suburban areas; preserve the existing rural and open space character of the County; provide for the permanent preservation of important natural and scenic resources; incorporate open space within developed areas; ensure the compatibility of existing and new development; maintain or enhance the character of the project site and its immediate area; conserve view corridors, skylines, and scenic vistas; and impose*

restrictions on development activities that may adversely affect the existing visual characteristics of sites within the County. Furthermore, Appendix J of the proposed General Plan contains Community Center Guidelines, that address landscape, streetscape, building, layout, and other aspects of the community centers. Adherence to these guidelines would reduce or eliminate aesthetic impacts relating to community center development."

There will be an associated change in views, both to and from the Project site.

As discussed in the Initial Study, the Project will not have a substantial effect upon a scenic highway corridor within which it is located. The Project site is not located within view from a state scenic highway. In addition, with adherence to code requirements and Project design features, the Project will not interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655; create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or expose residential property to unacceptable light levels (see **Standard Conditions SC-AES-2** and **SC-AES-3**). No cumulative impacts are anticipated on these issues that were discussed in the Initial Study.

No scenic vistas will be significantly altered due to implementation of the Project. Mountains that are visible from the Project site, or the immediate environs are faint, at best. In addition, there are no scenic vistas within the area that will be affected by the Project. While some views from the existing (and proposed) development may be obscured by the Project, they are not a true scenic view, as described by the General Plan EIR.

The Project will clearly change the visual setting for the Project site and its immediate environs. The Project is consistent with the General Plan Land Use Designation of Community Development: Medium Density Residential. The Project proposed a change of zone from R-1 (One-Family Dwellings) to R-4 (Planned Residential). As part of the R-4 zoning, site specific design guidelines were created to guide the implementation of the Project – consistent with the General Plan, as well as the *Third and Fifth Supervisorial Districts Design Standards and Guidelines* (see **Standard Conditions SC-AES-1**, **SC-AES-4**, and **SC-AES-5**). The Project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings, nor will the Project conflict with applicable zoning and other regulations governing scenic quality.

Agriculture and Forest Resources

As stated in the Initial Study, there is no timberland zoning on the Project site, nor is there any forest land on the Project site. Therefore the Project will not create any impacts (including cumulative impacts) to forestry resources due to a conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g)), the result in the loss of forest land or conversion of forest land to non-forest use, or involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

Based on the analysis above, the Project is not subject to the Williamson Act or within a Riverside County Agricultural Preserve. The Project will have a less than significant impact as it pertains to the conversion of 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, in a conflict with existing agricultural zoning or agricultural use, or cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm") (see **Standard Condition**

SC-AG-1).

Mitigation Measure MM-AG-1 has been included proposed to reduce conflicts between the Project and existing agricultural uses in proximity of the Project site (based on changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use) to a less than significant level.

Since the proposed Project will not have any significant adverse impact to agricultural or forestry resources or resource values, it cannot make a cumulatively considerable contribution to such resources or values. The Project's cumulative agriculture/forest resources impacts are considered less than significant.

Air Quality

The Project area is designated as an extreme non-attainment area for ozone and a non-attainment area for PM_{10} and $PM_{2.5}$.

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-AQ-2**, as well as **Mitigation Measure MM-AQ-1**, the proposed Project would not result in exceedances of regional air quality thresholds during construction. Therefore, the proposed Project construction-source air emissions would be considered a less than significant impact.

Mitigation Measure MM-GHG-1 shall be implemented to reduce operational source (VOC) emissions. 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. No feasible mitigation measures exist that would reduce this impact to less than significant levels.

Additionally, over 84 percent 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 beyond what is contained in **Mitigation Measure MM-GHG-1** that would reduce NO_x emissions to levels that are less than significant. Therefore, these emissions are considered significant and unavoidable.

Conflicts due to odors between the Project and the adjacent agricultural uses can be addressed through mitigation. Mitigation can be achieved by establishing a line of communication between the local farmers and future residents of the Project (see **Standard Condition SC-AG-1**, and **Mitigation Measure MM-AG-1**). These impacts are not considered cumulative in nature.

Biological Resources

Cumulative biological impacts are defined as those impacts resulting from the development within the MSCHP Plan Area as a result of build out of the Cities and County's General Plans. The MSHCP establishes the management of biological resources in western Riverside County that defines cumulative biological resource values and measures the loss of biology resources that constitutes a cumulative adverse impact.

Development of the proposed Project will contribute to the change of the general area with an intensification of development substantially greater than that which presently exists or can occur on the site or in the surrounding vicinity. The proposed Project will not cause adverse cumulative

effects related to the reduction of sensitive vegetation communities or degradation of other biology values present in western Riverside County.

With adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1, MM-BIO-2,** and **MM-BIO-3**, the Project will have a less than significant 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 Wildlife or U.S. Fish and Wildlife Service; will not substantially interfere 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; and will have no significant impacts (including cumulative impacts) as it pertains to effects 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 Wildlife or US Fish and Wildlife Service; or 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 stated in the IS, there are no oak trees on the Project site. The County's Oak Tree Management Guidelines would not be applicable. The provisions of Ordinance No. 559 would not apply since the Project site is not above 5,000 feet in elevation. No other tree preservation policy or ordinance apply to the Project site. Therefore, implementation of the Project will not conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance. No impacts will occur. Therefore, there will be no cumulative impacts.

There are no significant biology resources located within the Project site and the Project can be implemented consistent with the criteria identified in the MSHCP, with adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2,** and **MM-BIO-3**.

Based on adherence to **Standards Conditions SC-HYD-1**, **SC-HYD-2**, **SC-AES-2**, **SC-AES-3**, **SC-BIO-1** and **SC-BIO-2**, and incorporation of **Mitigation Measures MM-BIO-1**, **MM-BIO-2,** and **MM-BIO-3**, and the overall lack of any habitat to support sensitive species or a substantial wildlife population, the proposed Project will not result in adverse cumulative biology resource impacts that rise to a cumulatively considerable level. Project biology impacts are less than significant.

Cultural Resources

The cumulative study area for cultural and/or archaeological resources is the geographical area of the County of Riverside, which is the geographical area covered by the General Plan. Future development in the County could include excavation and grading, which could potentially impact cultural and/or archaeological resources and human remains. The cumulative effect of future development in the County is the continued loss of cultural and/or archaeological resources. Therefore, the proposed Project, in conjunction with other future development in the County, has the potential to cumulatively impact cultural and/or archaeological resources.

However, CEQA requires the County to conduct an environmental review of each project submitted. If the project has the potential to result in a significant impact to cultural, archaeological, and/or paleontological resources, CEQA requires the County to require the project proponent to investigate the site to determine the nature and extent of the existing resources and identify appropriate mitigation measures. If subsurface cultural and/or archaeological resources are assessed and/or protected as they are discovered, impacts to these resources will be less than significant. In addition, applicable General Plan policies will be implemented to reduce the effects

of future development in the County.

With implementation of **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, the Project's contribution to the cumulative loss of known and unknown cultural and/or archaeological resources in the County will be reduced to a level of less than significant.

Geology and Soils

Development of the Project will be affected by geotechnical constraints. None of the future Project-related activities are forecast to cause changes in geology or soils or the constraints affecting the Project area that cannot be fully mitigated. Geology and soil resources are inherently site specific and the only cumulative exposure would be to a significant geological or soil constraint (onsite fault, significant ground shaking that could not be mitigated or steep slopes creating a landslide exposure). Therefore, the Project has no potential to make a cumulatively considerable contribution to any significant geology or soils impact. Project soil and geology impacts are less than significant with the incorporation of **Standard Conditions SC-GEO-1** through **SC-GEO-3**, **SC-AQ-2**, and **SC-HYD-1** through **SC-HYD-3**.

Greenhouse Gas Emissions

GHG emissions are assumed to be cumulative. An individual project, such as the proposed Project cannot generate enough greenhouse gas emissions to effect a discernible change in global climate.

However, the proposed Project may contribute to global climate change by its incremental contribution of greenhouse gases. With implementation of **Standard Condition SC-GHG-1,** and **Mitigation Measure MM-GHG-1,** emission rates will be consistent with applicable significance thresholds established by the CAP. With implementation of these mitigation measures, impacts would be reduced to a less than significant level.

Thus, the proposed Project would not result in significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts with implementation of the mitigation measures. Project-related GHG emissions are not considered to be cumulatively considerable and would not result in a significant impact on global climate change.

Hazards and Hazardous Materials

The hazardous materials study area considered for cumulative impacts consists of (1) the area that could be affected by proposed activities, such as the release of hazardous materials, and (2) the areas affected by other projects whose activities could directly or indirectly affect the presence or fate of hazardous materials on site. In general, only the Project site and areas adjacent to the Project site are considered for cumulative impacts due to the limited potential impact area associated with release of hazardous materials into the environment.

According to the IS, the Project will have no impact such that it is 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, result in an inconsistency with an Airport Master Plan, require review by the Airport Land Use Commission, (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 result in a safety hazard for people residing or working in the Project area, or, (for a project within the vicinity of a

private airstrip, or heliport), would result in a safety hazard for people residing or working in the Project area).

Also according to the IS, the Project would have a less than significant impact such that it would impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan (see **Standard Condition SC-TR-2**), emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (see **Standard Condition SC-HYD-1** and **Standard Condition SC-HYD-2**), or, expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (see **Standard Condition SC-HAZ-1** and **Standard Condition SC-PS-1**).

Project construction would involve the routine use of hazardous materials, including fuels, paints, and solvents. However, the amount of these materials during construction would be limited and regulated. Therefore, they would not be considered a significant environmental hazard. Implementation of best management practices (BMPs) would further reduce any impacts associated with hazardous materials during Project construction (see **Standard Condition SC-HYD-1**).

Project operational activities would involve the use of storage of household hazardous materials typical of residences. These uses would not present a significant hazard to the residents of the community or to the environment with regulatory compliance procedures in place (see **Standard Condition SC-HYD-2**).

Mitigation Measure MM-HAZ-1 through **Mitigation Measure MM-HAZ-4**, are provided to reduce potential adverse hazards and hazardous material impacts related to accidental releases of hazardous materials during construction and operations, including known and unknown substances, and soils excavated from existing ponds.

Based on adherence to **Standard Conditions SC-HAZ-1**, **SC-HYD-1**, **SC-HYD-2**, **SC-PS-1**, and **SC-TR-2**, and incorporation of **Mitigation Measures MM-HAZ-1** through **MM-HAZ-4**, the proposed Project will not result in adverse cumulative hazard and hazardous materials impacts that rise to a cumulatively considerable level.

Hydrology and Water Quality

The proposed Project has been evaluated as to whether it will having a potential to cause significant flood hazards and a potential to substantially degrade water quality onsite and downstream. **Standard Conditions SC-HYD-1** through **SC-HYD-4** and design measures to control the proposed Project's contributions to flood hazards and water quality degradation have been defined and are available to control future hydrology and water quality degradation to a less than significant impact level. With implementation of the proposed stormwater management design, as outlined in the Project Specific WQMPs, and **Standard Conditions SC-HYD-1** through **SC-HYD-4**, future stormwater runoff after development of the Project site is not forecast to make a cumulatively considerable contribution to downstream flood hazards and water quality in the Santa Ana River Watershed. This conclusion is based on the findings that the proposed **Standard Conditions SC-HYD-1** through **SC-HYD-4** and design measures will not increase runoff from the Project site and will provide adequate attenuation of water pollutants in runoff from this residential area so as not to make a cumulatively considerable contribution to the runoff volume or water pollution within the Santa Ana River Watershed. Project hydrology and water quality cumulative impacts are less than significant.

Land Use and Planning

Implementation of the proposed Project, when considered in conjunction with other existing and planned developments in the Project area, would result in developing vacant land into 574 single-family residences, parks, roadways, and sewer and drainage improvements. The cumulative study area analyzed for potential land use impacts is the County of Riverside, *Sun City/Menifee Valley Area Plan,* and *Harvest Valley/Winchester Area Plan*.

The IS determined that the Project would not affect land use within a city sphere of influence and/or within adjacent city or county boundaries. No impacts will occur.

According to the analysis above, the Project will be consistent with the site's existing and proposed zoning, will be compatible with existing surrounding zoning, and will be compatible with existing and planned surrounding land uses.

Lastly, the Project will represent a change to a rural area that will result in a suburban form of development. This form of development is anticipated in the General Plan for the Project site and the environs surrounding the Project site. The Project would disrupt or divide the physical arrangement of an established community (agricultural, vacant, or large lot single-family residential); however, this impact will be less than significant.
Therefore, based on the analysis contained above in this Subchapter, the Project will not result in significant cumulative impacts.

Mineral Resources

As described in IS, the Project site and surrounding area do not contain any existing mineral development or any identified potential for mineral resource development. For mineral issues the amount of a mineral resource available in the region was used as the basis for cumulative impact analysis. Development of the proposed Project will not cause any adverse impacts to mineral resource or values. As a result, the proposed Project has no potential to contribute to any cumulative loss of mineral resources or values. The Project will have no cumulative adverse impact to mineral resources.

Noise

For the proposed Project, cumulative impacts are the incremental effects of the proposed Project when viewed in connection with the effects of past, current, and potential future projects within the cumulative impact area of the County of Riverside. The cumulative impact area for the Project is the site and its immediate environs.

The Initial Study indicated that there would be no impacts from the Project such that it would expose people residing or working in the Project area to excessive noise levels due to being 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, or expose people residing or working in the Project area to excessive noise levels due to being located within the vicinity of a private airstrip, or any railroad noise. No cumulative impacts would result.

Construction impacts will be less than significant. However, Best Management Practices, included as **Mitigation Measures MM-NOI-4** through **MM-NOI-8** and adherence to **Standard Condition SC-NOI-1** would further reduce noise levels produced by the construction equipment to the nearby sensitive residential land uses. These will not be cumulative impacts.

Mitigation Measure MM-NOI-1, requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable, and area cumulative impact.

To satisfy the 65 dBA CNEL exterior noise level standards for residential land use, **Mitigation Measure MM-NOI-2** shall be implemented. On-site impacts will be reduced to a less than significant level. There will be no cumulative impacts.

To satisfy the County's 45 dBA CNEL residential interior noise level standard, **Mitigation Measure MM-NOI-3** shall be implemented. Impacts will be reduced to a less than significant level. There will be no cumulative impacts.

Paleontological Resources

The cumulative study area for paleontological resources is the geographical area of the County of Riverside, which is the geographical area covered by the County General Plan, including all goals and policies included therein. Future development in the County could include excavation and grading that could potentially impact paleontological resources. The cumulative effect of the proposed Project is the continued loss of these resources. The proposed Project, in conjunction with other development in the City, has the potential to cumulatively impact paleontological resources; however, it should be noted that each development proposal received by the County undergoes environmental review pursuant to CEQA. If there is a potential for significant impacts to paleontological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface paleontological resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the County's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the County.

According to the IS, the proposed Project site is mapped in the *General Plan* as having a "High Potential" for paleontological resources (fossils). This category encompasses lands for which previous field surveys and documentation demonstrates a high potential for containing significant paleontological resources subject to adverse impacts. As such, this Project is anticipated to require direct mitigation for paleontological resources. **Standard Condition SC-PAL-1** (Condition of Approval 060 – Planning-PAL), shall be implemented.

County Paleontological Report (PDP) No. 1596, submitted for this Project (TTM37439), was prepared by CRM Tech, Inc. and is entitled "Paleontological Resources Assessment Report, Tentative Tract Map Number 37439, in and near the City of Menifee, Riverside County, California", dated January 2, 2018 (**Appendix J**, of the Initial Study. Provided on CD at the back of this DEIR.).

PDP01596 concluded:

Based on the research results presented, the Project's potential to impact significant paleontological resources is determined to be low in the extensively disturbed, course-grained surface sediments but high in the relatively undisturbed, finer-grained, older Pleistocene sediments that are anticipated below the surface in most of the Project area.

PDP01596 recommended:

CRM TECH recommends that a paleontological resource impact mitigation program (PRIMP) be developed and implemented during the Project to prevent such impacts or reduce them to a level less than significant. The mitigation program should be developed in accordance with the provisions of CEQA as well as the proposed guidelines of the Society of Vertebrate Paleontology (2010).

PDP01596 satisfies the requirement for a Paleontological Resource Assessment for CEQA purposes. PDP01596 was accepted for TTM37439 in the Conditions of Approval. A PRIMP shall be required prior to issuance of a grading permit for this Project.

Standard Condition SC-PAL-1 is not considered unique mitigation under CEQA. Therefore, with adherence to **Standard Condition SC-PAL-1**, any Project impacts that could directly or indirectly destroy a unique paleontological resource, or site, or unique geologic features would be less than significant. Cumulative impacts would also be less than significant.

Population and Housing

As defined in the *CEQA Guidelines,* cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for population and housing. The cumulative study area used to assess potential cumulative population and housing impacts includes the County of Riverside, which is the regional context for the Project.

The IS determined that the Project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere, or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income, displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, or affect a County Redevelopment Project Area. No impacts will occur. The IS also determined that the Project would have a less than significant impacts when it comes to cumulatively exceed official regional or local population projections. Project increases to population and households are incremental, and due to their small percentage in relation to the City and County, they are not considered substantial increases to population and households.

The residential population growth from the Project is not cumulatively considerable and is not a significant adverse population or housing impact. As indicated in the preceding analysis, the proposed Project may have a growth inducing impact on the community due to the Project's location, and the new infrastructure will that be built as part of this Project. Said infrastructure will contribute to extending improved services into the area. These improvements are what are envisioned under the long-range planning documents of the County, Riverside County Flood Control and Water Conservation District, and Eastern Municipal Water District. Therefore, these are not considered a significant cumulative impact.

Public Services

Fire Services

According to the IS, as part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 –

Harvest Valley/Winchester. DIF for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 services, are considered incremental, less than significant, and will not result in any significant cumulative impacts.

Sheriff Services

According to the IS, as part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to sheriff services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for sheriff services will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for sheriff services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 sheriff services, are considered incremental, less than significant, and will not result in any significant cumulative impacts.

Schools

According to the IS, implementation of the proposed Project will result in an incremental impact on the demand for school services. The Residential Project site components are located with the Menifee Union School District (MUSD), for kindergarten through 8th grades, and Perris Union High School District (PUHSD) for 9th-12th grades.

The following student generation factors are utilized by MUSD for single-family detached units:

- Elementary school: 0.3038/dwelling unit
- Middle school: 0.1396/dwelling unit

The following student generation factors are utilized by PUHSD for single-family detached units:

- High school: 0.1043/dwelling unit

Based on 574 residential units, the Project will generate the following approximate number of students:

- Elementary school: 175
- Middle school: 80
- High school: 60

Impacts to MUSD and PUHSD facilities will be offset through the payment of impact fees to the MUSD and PUHSD, prior to the issuance of a building permit. MUSD and PUHSD residential rates are currently $2.73 per square foot, and $1.09 per square foot, respectively. This fee is subject to change, and the applicable fees, at time of building permit issuance, shall apply.

Payment of these fees (**Standard Condition SC-PS-2**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. After payment of these fees, any impacts will be considered less than significant, and will not result in any significant cumulative impacts.

Libraries

As discussed in the IS, library impacts are typically attributed to residential development. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for libraries will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for library services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

With payment of the DIF, any impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 library services, are considered less than significant, and will not result in any significant cumulative impacts.

Health Services

According to the IS, the Project proposes 574 single-family residences and would have a build-out population of approximately 1,757 persons (based on 3.06 persons per single-family residential household). This increase in population to the Project area will create a need for additional health and medical services.

The Riverside County General Plan EIR states that impacts to medical facilities will be significant as a result of population increase. The following General Plan EIR Mitigation Measure (4.15.7A) was adopted with the County's General Plan in 2003 to aid in the reduction of significant impacts:
Mitigation Measure (4.15.7A):

> *Riverside County shall perform a periodic medical needs assessment to evaluate the current medical demand and level of medical service provided within each Area Plan. A periodic medical needs assessment shall be conducted every three years.*

As the County's population grows, new medical facilities will be required to provide health and medical services for an expanded population. Since the Project is consistent with the County's General Plan Land Use Plan designation of Community Development: Medium Density Residential (CD:MDR), the proposed Project's impact the County-wide health and medical facilities would be similar to what was anticipated in the County's General Plan.

Medical offices, urgent care clinics, local medical services, hospital beds and major facilities, such as trauma units and emergency rooms are available within proximity of the Project site. This fact, coupled with the Periodic Medical Needs Assessment, which is required by Mitigation Measure 4.15.7A of the County General Plan EIR, can ensure that adequate health and medical services are available to the Project residents. Based on this analysis, the potential impacts related to health services are considered less than significant and will not result in any significant cumulative impacts.

Recreation

The cumulative study area for recreation resources is the County of Riverside, which is the area used by the County when determining its park-to-population ratio goals. The County requires new development to provide a minimum of three acres of public open space for every 1,000 residents or pay an in-lieu fee. The Board of Supervisors may increase the acreage to 5 acres per 1,000 residents if the acreage dedicated to parkland already exceeds 3 acres per 1,000 residents.

The Project is proposing to dedicate 8.96-acres to the County and develop on the land a community park with recreational facilities appropriate for "league" play. At 8.96-acres, the community park will exceed the 5 acres per 1,000-resident maximum and is consistent with Ordinance No. 460.

The Project will also include 25.81-acres of open space for the development of paseos, passive landscape areas, and perimeter landscaping, and will develop drainage basins on 7.23 acres. No parkland credit is requested for the open space or drainage basins as the dedication and construction of the 8.96-acre community park satisfies the requirements of Ordinance No. 460.

Implementation of the proposed Project in combination with cumulative projects in the area would increase the use of existing parks and recreation facilities. However, as future residential development is proposed, the County would require developers to provide the appropriate amount of parkland or pay the in-lieu fees, which would contribute to future recreational facilities. Payment of these fees and/or implementation of new parks on a project-by-project basis would offset cumulative parkland impacts by providing funding for new and/or renovated parks equipment and facilities, or new parks.

The cumulative impacts associated with development of the Project would be a less than significant impact to recreation resources.

Transportation

According to the IS, the Project will have no impact that would result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; alter waterborne, rail or air traffic, or substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). Also, according to the IS, the Project would have a less than significant impact that would cause an effect upon, or a need for new or altered maintenance of roads, cause an effect upon circulation during the Project's construction (see **Standard Condition SC-TR-2**), or result in

inadequate emergency access. Per the analysis above, the Project would have a less than significant impact resulting in a conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, or a conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities. No cumulative impacts will occur.

The proposed Project will contribute to the generation of additional traffic on local and regional roadways. The proposed Project is consistent with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable as well as cumulatively significant. In addition, the Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will also result in a significant cumulative impact.

Tribal Cultural Resources

The cumulative study area for tribal cultural resources is the geographical area of the County of Riverside, which is the geographical area covered by the County General Plan, including all goals and policies included therein, as well as the historic tribal area contained therein. Future development in the County could include excavation and grading that could potentially impact tribal cultural resources and human remains. The cumulative effect of the proposed Project is the continued loss of these resources. The proposed Project, in conjunction with other development in the County, has the potential to cumulatively impact tribal cultural resources; however, it should be noted that each development proposal received by the County undergoes environmental review pursuant to CEQA. If there is a potential for significant impacts to tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface tribal cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the County's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the County.

With implementation of **Standard Condition SC-CUL-1** and **Mitigation Measures MM-CUL-1** through **MM-CUL-6**, the contribution of the proposed Project to the cumulative loss of known and unknown tribal cultural resources throughout the County would be reduced to a less than significant level.

Utilities and Service Systems

According to EMWD, there is an adequate water supply and sewer capacity, respectively, to meet the demand of the Project(s). Based on the analysis above, and in the referenced documentation, water and wastewater management systems are capable of meeting the cumulative demand for these systems. With adherence **Standard Conditions SC-USS-1** through **SC-USS-4** and **SC-**

HYD-4, impacts are considered less than significant. Thus, the Project will not cause cumulatively considerable significant adverse impacts on these systems. With implementation of the proposed stormwater management design, as outlined in **Standard Conditions SC-HYD-1** through **SC-HYD-3**, future stormwater runoff after development of the Project site will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and is not forecast to make a cumulatively considerable contribution to downstream flood hazards in the Santa Ana River Watershed.

As discussed in the IS, cumulative impacts to landfill capacity will be less than significant due to the Project construction debris and operational waste representing a less than substantial cumulative increment. In addition, with adherence to **Standard Condition SC-PS-1**, for the maintenance of public facilities, including roads and other governmental services, any impacts will be less than significant and will not result in a significant cumulative impact.

Development proposed at the Project site would result in a permanent and continued use of electricity and natural gas resources. Sufficient power and distribution capabilities exist to provide electrical services to the proposed Project, but additional transmission capacity will be necessary to provide power to support the current and future cumulative growth in the vicinity. The proposed Project would contribute to the cumulative need for electricity the Project's cumulative contribution to impacts on the area electricity grid is considered to be less than significant.

As stated in the 2006 California Gas Report, SoCalGas projects that contribute to cumulative gas demand for residential meters will increase at an average annual rate of 1.3 percent from 2006 to 2025. When all market sectors are taken into account, average annual demand for natural gas is projected to occur at a rate of 0.15 percent over the same time period. For residential customers, use per meter is forecasted to decline due to the expected energy savings from higher building and appliance standards and energy efficiency programs**,** such as those required in the Project. Mitigation measures are provided to reduce overall energy consumption.

However, demand will be influenced by growth. By 2025, residential demand is expected to reach 279 Billion cubic feet (Bcf), an increase of 25 Bcf from 2005. Commercial and industrial market segments are also projected to decrease due to the California Public Utilities Commission authorized energy efficiency programs. Since the Project would: constitute only approximately 0.00010 percent of the residential customer base in 2004 and the proposed Project has been required to install Energy Star-rated models of appliances and would be served by existing and planned service and transmission lines within and around the project area, this Project's cumulative energy demand impacts are concluded to a less than significant impact.

To further reduce electricity demand, mitigation measures are provided to reduce overall energy consumption. **Mitigation Measure MM-GHG-1** will reduce the energy demand of the proposed Project. In addition, **Mitigation Measure MM-GHG-1** is designed to increase the water and energy efficiency of the buildings such that the per capita electrical demand of the residences would be substantially lower than in conventionally built homes.

With the incorporation of **Standard Conditions SC-USS-4** through **SC-USS-7**, impacts from electricity and natural gas are considered less than significant level and no cumulative impacts will result.

Energy

Energy usage is assumed to be cumulative. The proposed Project will result in an incremental use

of energy during construction and operations. 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 conservations goals within the State of California. Any impacts would be reduced to a less than significant level with the incorporation of **Mitigation Measure MM-GHG-1**.

Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Project-related energy usage is not considered to be cumulatively considerable and would not result in a significant impact with the incorporation of **Mitigation Measure MM-GHG-1**.

Wildfire

Also according to the IS, the Project would have a less than significant impact such that it would impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan (see **Standard Condition SC-TR-2**), 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; 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; 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; or, expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (see **Standard Condition SC-HAZ-1** and **Standard Condition SC-PS-1**).

Conclusion

Based on the detailed cumulative impact analysis provided in Chapter 4 for each environmental issue, and as summarized above, cumulatively considerable environmental impacts are forecast to result to air quality, noise, and transportation from implementing the proposed Project as described in Chapter 3 of this Draft EIR.

6.3 SIGNIFICANT IRREVERSIBLE AND/OR UNAVOIDABLE ENVIRONMENTAL IMPACTS

In considering the topic of "Significant Irreversible and/or Unavoidable Environmental Impacts," it is important to define the terminology that is used in making impact forecasts. For example, an "unavoidable significant adverse environmental impact" is an effect of a proposed Project that cannot be avoided or reduced below some specific threshold of significance by any available or feasible mitigation measure or feasible alternative to that Project. These impacts are discussed in the subchapter text for each environmental issue in Chapter 4 of this document.

An irreversible impact is an impact that once experienced, cannot be changed or modified, by any means. Irreversible impacts have more nuance than do unavoidable impacts. For example, if a project results in the death of the last individual of an endangered species, this impact cannot be reversed (at least with technology available at this time). At least for the present, we cannot make any more individuals of the species. On the other hand, if air emissions from a project exceed established thresholds and are considered significant, it is feasible that future improvements in air emissions controls could reverse this impact and reduce (reverse) or perhaps eliminate the air

emissions and reduce or reverse the significant impact. For example, if project mobile source emissions contribute to a significant air quality impact, increase availability and/or adoption of electric vehicles could reduce the air quality emissions attributable to the project. Thus, the potential for a reversal of an identified impact, be it less than significant or significant, depends on the time scale used for evaluation (forever or just next year) and the likelihood that sufficient resources (societal or individual) will be applied to reverse an impact.

Another example that illustrates this topic is the potential exposure of people to an accidental spill of an acutely hazardous or toxic substance. If the threat is significant enough, society will demand that such exposure be eliminated immediately. Thus, such a spill and the related exposure to the hazard may be a significant environmental impact but it is typically immediately reversed. Where it is not reversed the potential significant effects will remain until sufficient individual or societal resources are expended to eliminate the hazard.

Irreversible Environmental Impacts

The following analysis of irreversible environmental effects is presented for the reviewer's consideration.

Section 15126.2 (c) of the CEQA Guidelines requires that the EIR consider and discuss significant irreversible changes that would be caused by implementation of the proposed Project. The CEQA Guidelines specify that the use of nonrenewable resources during the construction and operation of the project be discussed because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary and secondary impacts (such as a highway improvement that provides access to a previously inaccessible area) should also be discussed because such changes generally commit future generations to similar uses. Irreversible damage can also result from environmental accidents associated with the project and should be discussed.

Project development is an irreversible commitment of the land. After the 50- to 75-year structural lifespan of the buildings is reached, it is improbable that the site would revert to an undeveloped state. Once developed, the proposed Project would have indefinitely altered the characteristics of the Project site from vacant land to one characterized by residential, open space, and park uses.

Construction of the Project would result in a commitment of limited, slowly renewable, and nonrenewable resources. Such resources may include certain types of lumber and other forest products; raw materials such as steel; aggregate materials used in concrete and asphalt such as sand and stone; water; petrochemical construction materials such as plastic; and petroleum-based construction materials. Fossil fuels used by construction equipment would also be consumed. Project construction will also result in an increased commitment of public maintenance services such as waste disposal and sewage treatment.

Similarly, operation of the proposed Project would result in the commitment of limited, nonrenewable, and slowly renewable resources such as natural gas, electricity, petroleum-based fuels, fossil fuels, and water. Title 24 of the California Code of Regulations requires conservation practices that will limit the amount of energy consumed by the proposed Project. Compliance with Title 24 is mandated by the State, and participation in the Leadership in Energy and Environmental Design program is voluntary. Nevertheless, the use of such resources by the proposed Project will continue to represent a long-term commitment of essentially nonrenewable resources.

Operation of the proposed Project would also require potable water. It is projected that the Project will add in increment of 57,400 mgd of wastewater (based on 100 mgd/day/household). Based on the conclusions documented in the *Water Supply Assessment Report, Canterwood Project*,

prepared by Eastern Municipal Water District, February 21, 2018 (*WSA*, **Appendix N**) the total projected water supplies available to EMWD during normal, single dry, and multiple dry water years are sufficient to meet the projected water demand (including the proposed Project), in addition to EMWD's existing and planned future uses. However, the increase in water use will continue to represent a long-term commitment of this essentially nonrenewable resource.

On-site surface water drainage in the developed condition would be different from the existing natural condition, as described in Subchapter 4.10, Hydrology and Water Quality. Project hydrology would meet drainage system standards, and pollutants of concern would be controlled through implementation of structural and nonstructural BMPs during Project construction and operation.

As discussed in Subchapter 4.5, Biological Resources, implementation of the proposed Project would result in impacts to native plant communities, jurisdictional areas, wildlife and wildlife habitat, and a species protected under the Migratory Bird Treaty Act. In addition, site topography would be modified per the conceptual grading plan for the site, and on-site topography would be substantially different after Project implementation.

The commitment of limited, slowly renewable, and nonrenewable resources required for construction and operation of the proposed Project would limit the availability of these resources for future generations or for other uses during the life of the Project.

Significant Unavoidable Environmental Impacts

The following is a summary of significant adverse impacts that are forecast to occur if the proposed Project is implemented as proposed.

Air Quality

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that after implementation of **Standard Conditions SC-AQ-1** and **SC-AQ-2**, as well as **Mitigation Measure MM-AQ-1**, construction of the proposed Project would not result in emissions that exceed applicable SCAQMD regional air quality thresholds. Project operational-source emissions would exceed applicable SCAQMD regional thresholds of significance for emissions (VOC and NO_x) during operation even after implementation of the recommended mitigation measures. All other criteria pollutants are below thresholds. Impacts will remain significant and unavoidable during operations.

Noise

Mitigation Measure MM-NOI-1 requires the use of rubberized asphalt for the following off-site roadway segments: Leon Road south of Craig Avenue (Segment #6), Leon Road south of Garbani Road (Segment #7), and Holland Road west of Leon Road (Segment #12). Even with incorporation of **Mitigation Measure MM-NOI-1**, a significant and unavoidable impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). In addition, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance. These impacts are considered significant and unavoidable.

Transportation

The proposed Project will contribute to the generation of additional traffic on local and regional roadways. The proposed Project is consistent with the General Plan's Circulation Element, i.e. the proposed Project will install adjacent roadways to General Plan standards and will pay fair share funds to improvements on area roadways through payment of TUMF (see **Standard Condition SC-TR-1**) and DIF (see **Standard Condition SC-TR-3**). The Project will be required to implement **Mitigation Measure MM-TR-4** (TUMF/DIF) and **Mitigation Measure MM-TR-5** (Fair-Share contributions). Because the County of Riverside does not have plenary control over intersections that share a border with the City of Menifee, the County cannot guarantee that such improvements will be constructed. Therefore, the Project's impacts would be considered significant and unavoidable as well as cumulatively significant. In addition, the Project will contribute to existing and future traffic on Interstate 215. Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the County of Riverside (or other neighboring jurisdictions) on the SHS roadway segments (Interstate 215). As such, no improvements have been recommended to address the deficiencies on the SHS. This will also result in a significant cumulative impact.

Conclusion

The proposed Project would result in significant unavoidable impacts to air quality, noise, and transportation. No other significant unavoidable impacts are forecast to occur as a result of construction or operation of the proposed Project.

CHAPTER 7 – PREPARATION RESOURCES

7.1 REPORT PREPARATION

7.1.1 Lead Agency

County of Riverside
4080 Lemon Street, 12th Floor
Riverside, CA 92502
951.955.3025
Point of Contact: Russell Brady, Project Planner
rbrady@rivco.org

7.1.2 EIR Consultant

Matthew Fagan Consulting Services, Inc.
42011 Avenida Vista Ladera
Temecula, CA 92951
951.265.5428
Point of Contact: Matthew Fagan, Owner
matthewfagan@roadrunner.com

7.1.2 EIR Technical Consultants

Air Quality – Urban Crossroads, Inc.
Biology – Helix Environmental Planning, Inc.
Cultural – Jean A. Keller, Ph.D.
Geotechnical – RMA GeoScience
Greenhouse Gases – Urban Crossroads, Inc.
Phase 1 ESA – RMA GeoScience
Hydrology / Water Quality – JLC Engineering and Consulting, Inc.
Noise – Urban Crossroads, Inc.
Traffic – Urban Crossroads, Inc.
Water Supply Assessment – Eastern Municipal Water District
Energy Analysis – Urban Crossroads, Inc.
Vehicle Miles Traveled – Urban Crossroads, Inc.

7.2 BIBLIOGRAPHY

2010 U.S. Census
https://www.census.gov/2010census/

2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (*2016 RTP/SCS*)
http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

2016 RTP/SCS Final PEIR – Section 3.11 Land Use and Planning
http://scagrtpscs.net/Documents/2016/peir/draft/2016dPEIR_3_11_LandUseandPlanning.pdf

Additional Chemical Testing for Tract 37439, APNs 466310026, and 466310002, SE of Briggs Rd. and Holland Rd., Winchester, CA 92596, prepared by RMA GeoScience, September 11, 2018 (**Appendix H2**)

A Phase I Cultural Resources Assessment of Tentative Tract No. 37439 and Associated Off-Site Infrastructure Improvements, prepared by Jean A. Keller, Ph.D., March 2018 (**Appendix E**)

Assembly Bill 52 (AB 52) Formal Notification (TTM 37439, CZ 1800007), prepared by County of Riverside, April 2, 2018 (**Appendix L**)

CAL FIRE
http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_faqs#sra01

California Energy Commission, Summer 2012 Electricity Supply and Demand Outlook, *May 2012*
http://www.energy.ca.gov/2012publications/CEC-200-2012-003/CEC-200-2012-003.pdf

California Energy Commission, Preliminary California Energy Demand Forecast 2012-2022, August 2011
http://www.energy.ca.gov/2011publications/CEC-200-2011-011/CEC-200-2011- 011-SD.pdf

California Gas & Electric Utilities, *California Gas Report-Southern California Gas Company,* 2006 National Pipeline Mapping System website
https://pvnpms.phmsa.dot.gov/PublicViewer/

California Government Code § 66477
https://codes.findlaw.com/ca/government-code/gov-sect-66477.html

California Water Boards Santa Ana Region Basin Plan
https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/2016/Chapter_3_Feb_2016.pdf

Canterwood (TTM No. 37439) Energy Analysis, prepared by Urban Crossroads, Inc., February 27, 2019 (**Appendix Q**)

Canterwood Project (Tentative Tract Map No. 37439) General Biological Assessment, prepared by Helix Environmental Planning, Inc., September 4, 2018 (**Appendix D**)

Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis, prepared by Urban Crossroads, Inc., February 27, 2019 (**Appendix C**)

Canterwood (Tentative Tract Map No. 37439) Greenhouse Gas Analysis, prepared by Urban Crossroads, Inc., February 27, 2019 (**Appendix G**)

Canterwood (Tentative Tract Map No. 37439) Noise Impact Analysis, prepared by Urban Crossroads, Inc., September 19, 2018 (**Appendix J**)

Canterwood (TTM No. 37439) Supplemental Air Quality and Greenhouse Gas Assessment, prepared by Urban Crossroads, Inc., January 14, 2020 (**Appendix R**)

Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, prepared by Urban Crossroads, Inc., June 5, 2018 (**Appendix K**)

Canterwood (TTM No. 37439) Traffic Impact Analysis - Vehicle Miles Traveled, prepared by

Urban Crossroads, Inc., February 28, 2019 (**Appendix P**)

County of Riverside General Plan
https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx

County of Riverside General Plan Environmental Impact Report (GPEIR)
https://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html#4.4.1

County of Riverside Ordinances
http://www.rivcocob.org/ordinances/

Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439), prepared by Matthew Fagan Consulting Services, Inc., March 2019 (**Appendix M**)

Design Standards & Guidelines – Third and Fifth Supervisorial Districts, County of Riverside, July 17, 2001 (*Guidelines*)
https://planning.rctlma.org/Portals/0/devproc/guidelines/third_fifth_dist/third_fifth_dguide.pdf

Eastern Municipal Water District
www.emwd.org

Eastern Municipal Water District (EMWD), 2015 Urban Water Management Plan (*2015 UWMP*), June 2016
https://www.emwd.org/home/showdocument?id=1506

Eastern Municipal Water District Comprehensive Annual Financial Report EMWD For the Fiscal Year Ended June 30, 2017
https://www.emwd.org/home/showdocument?id=16318

EMWD Consolidated Schedule of Rates, Fees and Charges (proposed for February 21, 2018 Board Approval)
https://www.emwd.org/home/showdocument?id=6281

EMWD Capital Improvement Program Update (*CIP Update*)
http://docplayer.net/42139514-Capital-improvement-program-update.html

EMWD Capital Improvement Program Update, Power Point Presentation, prepared by Joe Mouawad, P.E., dated November 9, 2016
https://board.emwd.org/Citizens/FileOpen.aspx?Type=4&ID=5620&MeetingID=1493
EMWD Charges and Deposits
https://www.emwd.org/construction/developer-project-help-desk/charges-and-deposits#sewer

Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439, prepared by RMA GeoScience, March 20, 2018 (**Appendix F**)

Google Maps
https://www.google.com/maps

Harvest Valley/Winchester Area Plan (HVWAP)
https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pd

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Map My County (**Appendix A**)

Metropolitan Water District (MWD), 2015 Regional Urban Water Management Plan (2015 RUWMP), June 2016
http://www.mwdh2o.com/PDF%202016%20Background%20Materials%20Part%202/Metropolitan%20Draft%202015%20UWMP%20to%20MAs%20-%20Full%20Report%2012-17-2015_HiRes.pdf

Paleontological Resources Assessment Report Tentative Tract Map Number 37439, prepared by CRM TECH, January 2, 2018 (**Initial Study Appendix J**)

Phase I Environmental Site Assessment, for Tract 37439 and Channel Improvement APNs 466-120-019, 466-120-002, 466-120-022, *466-310-026, 466-310-002,* prepared by RMA GeoScience, March 5, 2018 (**Appendix H1**)

Phase I Environmental Site Assessment Northwest Corner of APN 364-200-007, prepared by RMA GeoScience, March 29, 2018 (**Appendix H3**)

Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439, prepared by JLC Engineering and Consulting, Inc., June 19, 2018 (**Appendix I2**)

Project Specific Water Quality Management Plan Tentative Tract Map 37439, prepared by JLC Engineering and Consulting, Inc., June 19, 2018 (**Appendix I1**)

Riverside County Stormwater & Water Conservation Tracking Tool
http://rivco.permitrack.com/

Riverside County Water Quality Management Plan for Urban Runoff
http://rcflood.org/downloads/npdes/WQMP%20with%20Exhibit%20C%2009-17-04%20Errata%20Revisions%20Tracked%20v.pdf

San 53 (*Sewer and Water Availability) APNs 466-310-002, 466-310-026*, prepared by Eastern Municipal Water District, February 5, 2018 (**Appendix O**)

SCAG Sustainability Planning Grant Website:
http://sustain.scag.ca.gov/Pages/Grants%20and%20Local%20Assistance/GrantsLocalAssistance.aspx

Site Photos, April 18, 2018 (**Appendix B**)

Southern California Association of Governments
http://www.scag.ca.gov/about/Pages/Home.aspx

Southern California Association of Governments Final 2016 Regional Transportation Plan (RTP) Demographics & Growth Forecast
http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf

Sun City/Menifee Valley Area Plan (SCMVAP)
https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/SCMVAP_121316.p

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Title 14 California Code of Regulations (14 Cal. Code Regs.) §15064.5
https://www.dir.ca.gov/dlse/CCR.htm

United States Environmental Protection Agency Web site
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Water Efficient Guidelines for New Development, July 19, 2013
http://www.emwd.org/home/showdocument?id=6987

Water Supply Assessment Report, Canterwood Project, prepared by Eastern Municipal Water District, February 21, 2018 (**Appendix N**)

Western Riverside Council of Governments Website
http://www.wrcog.cog.ca.us

Western Riverside County Multiple Species Habitat Conservation Plan
http://rctlma.org/Portals/0/mshcp/volume1/sec6.html

Western Riverside County Non-Motorized Transportation Plan
http://ca-wrcog.civicplus.com/DocumentCenter/View/194/Non-Motorized-Transportation-Plan-PDF?bidId=

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CHAPTER 8 – APPENDICES

8.1 NOTICE OF PREPARATION (NOP) / NOP DISTRIBUTION LIST

8.2 NOP COMMENT LETTERS AND SCOPING MEETING COMMENTS

8.3 INITIAL STUDY

APPENDIX 8.1

NOTICE OF PREPARATION / NOP DISTRIBUTION LIST

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach, P.E.
Assistant TLMA Director

Agency Notice of Preparation of a Draft Environmental Impact Report

DATE: October 8, 2018

TO: Distribution List of Responsible Agencies and Interested Parties

PROJECT CASE NO./TITLE: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439); Plot Plan No. 180024 (PPT 180024).

PROJECT LOCATION: The "Residential Project Site" components, which are covered under CZ 1800007 and TTM 37439, and are located west of Eucalyptus Road, north of Craig Avenue, east of Leon Road, and south of Holland Road. The "Off-site Project" components are located generally west of Leon Road and south of Holland Road and then crosses north of Holland Road and west of Briggs Road.

PROJECT DESCRIPTION: The "Residential Project Site" includes applications CZ1800007, TTM 37439, and PPT 180024. The current zoning classification on the residential Project site is R-1 (One-Family Dwellings). CZ 1800007 proposes to change the zoning classification on the entire residential Project site of 158.18 gross acres from R-1 to R-4 (Planned Residential). TTM 37439 proposes a subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. The density of TTM 37439 is 3.6 dwelling units/acre. PPT 180024 proposes a development plan for 574 single-family residential lots. Five (5) architectural styles have been provided. A minimum 8.96-acre community park will provide the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. PPT 180024 also features landscape buffers, passive open space areas, ten (10) paseos, and approximately 13,264 linear feet (LF) of trails/paseos and 56,417 LF of public street sidewalks.

The "Off-site Project" components consist of the following:

- 10,850 linear feet of 33" and 30" diameter sewer line, which will be approximately 15 feet in depth and will extend from Leon Road midway between Holland and Craig Roads, then proceed 5,780' northwesterly within an Eastern Municipal Water District easement on separately owned property to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW to Tres Lagos Drive, then proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.
- 5,300 linear feet of roadway improvements installed along Holland Road with 8 to 10 foot wide depressed shoulders. No curb, gutter, sidewalks, or streetlights shall be installed. Roadway improvements will be south of the San Pedro Farms Project (TTM 36467), known as Assessor Parcel Number 466-030-002.
- Temporary Drainage Channels: A total of five (5) temporary drainage channels will be provided for the Project. These are located along Craig Avenue and Eucalyptus Road ROWs.

Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.

- The Project has several regional flood control channels that are proposed for the Project that are both within and outside the Project boundary.

See attached Assessor's Parcel Numbers Map.

LEAD AGENCY:
Riverside County Planning Department
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, CA 92502-1409
Attn: Russell Brady, Project Planner

PROJECT SPONSOR:
Applicant: Sun Holland, LLC
Address: 27127 Calle Arroyo, #1910
San Juan Capistrano, CA 92675

Pursuant to the California Environmental Quality Act, notice is given to responsible and interested agencies, that the Riverside County Planning Department plans to oversee the preparation on an Environmental Impact Report for the above-described project. The purpose of this notice is to solicit guidance from your agency as to the scope and content of the environmental information to be included in the EIR. Information in that regard should be submitted to this office as soon as possible, but **not later than thirty (30) days** after receiving this notice.

PUBLIC SCOPING MEETING:

A SCOPING SESSION has been scheduled before the RIVERSIDE COUNTY PLANNING DIRECTOR in order to bring together and resolve the concerns of affected federal, state and local agencies, the proponent of the proposed project, and other interested persons; as well as inform the public of the nature and extent of the proposed project indicated below, and to provide an opportunity to identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the EIR and help eliminate from detailed study issues found not to be important.

The Scoping Session is not a public hearing on the merit of the proposed project and NO DECISION on the project will be made. Public testimony is limited to identifying issues regarding the project and potential environmental impacts. The project proponent will not be required to provide an immediate response to any concerns raised. The project proponent will be requested to address any concerns expressed at the Scoping Session, through revisions to the proposed project and/or completion of a Final Environmental Impact Report, prior to the formal public hearing on the proposed project. Mailed notice of the public hearing will be provided to anyone requesting such notification.

TIME OF SCOPING SESSION: 1:30 p.m. or as soon as possible
DATE OF SCOPING SESSION: November 5, 2018
PLACE OF SCOPING SESSION: County Administrative Center
1st Floor Conference Room 2A
4080 Lemon Street
Riverside, CA 92501

Please send all written correspondence to:

rbrady@rivco.org or to

Riverside County Planning Department
Attn: Russell Brady
P.O. Box 1409 Riverside, CA 92502-1409

An e-copy of the Environmental Assessment No. 38874, which identifies the issues to be studied in the draft EIR, is attached. If you have any questions please contact Russell Brady, Project Planner at rbrady@rivco.org or (951) 955-3025.

Sincerely,

RIVERSIDE COUNTY PLANNING DEPARTMENT
Charissa Leach, P.E., Assistant TLMA Director

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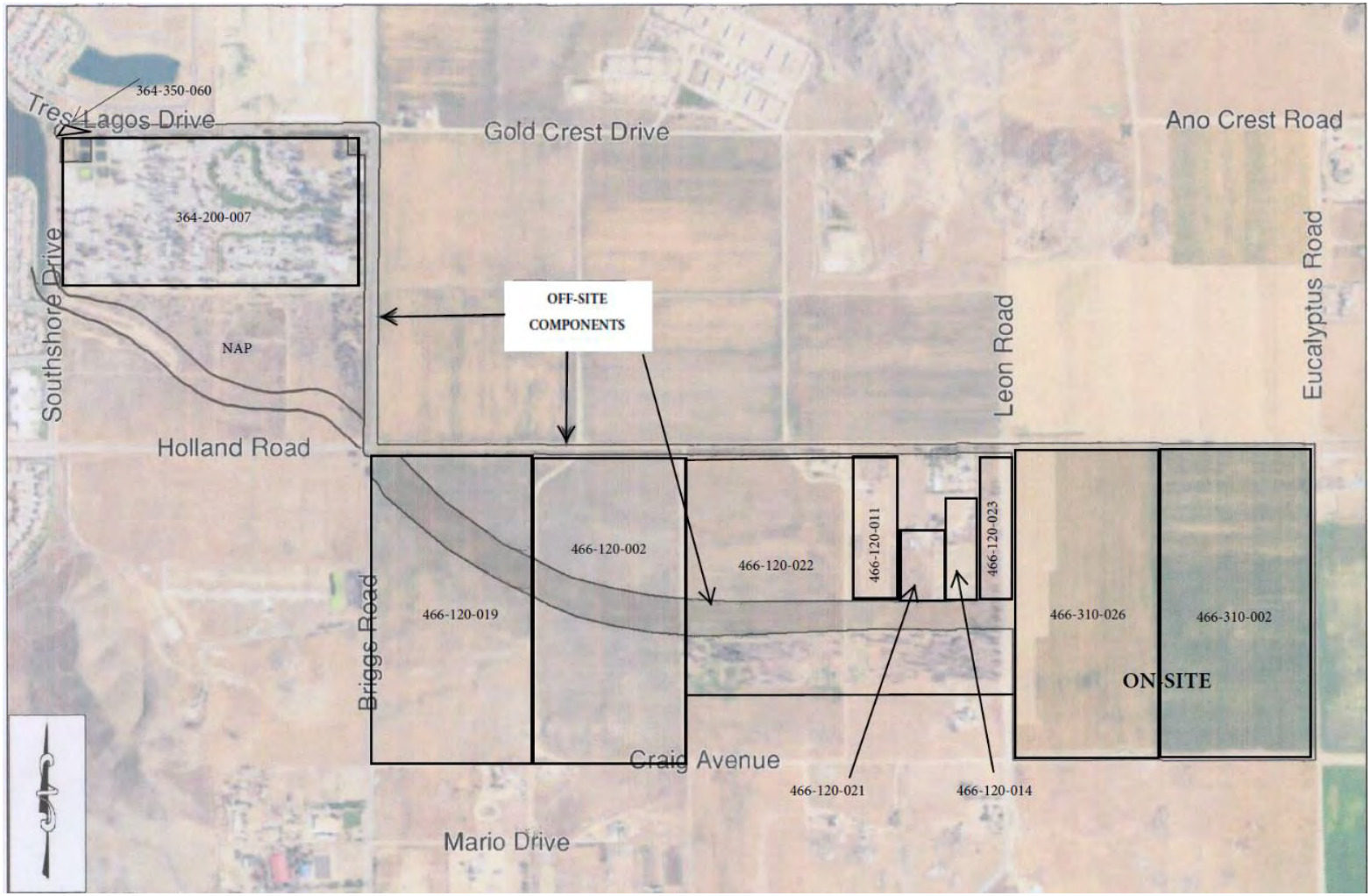
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Tres Lagos Drive
Gold Crest Drive
Ano Crest Road
364-200-007
Southshore Drive
OFF-SITE
COMPONENTS
NAP
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Eucalyptus Road
Holland Road
466-120-002
466-120-022
466-120-011
466-120-023
466-120-019
466-310-026
466-310-002
Briggs Road
ON-SITE
Craig Avenue
466-120-021
466-120-014
Mario Drive

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach, P.E.
Assistant TLMA Director

Applicant's Notice of Preparation of a Draft Environmental Impact Report

DATE: October 8, 2018

TO: Sun Holland, LLC
27127 Calle Arroyo, #1910
San Juan Capistrano, CA 92675

PROJECT CASE NO./TITLE: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439); Plot Plan No. 180024 (PPT 180024).

PROJECT LOCATION: The "Residential Project Site" components, which are covered under CZ 1800007 and TTM 37439, and are located west of Eucalyptus Road, north of Craig Avenue, east of Leon Road, and south of Holland Road. The "Off-site Project" components are located generally west of Leon Road and south of Holland Road and then crosses north of Holland Road and west of Briggs Road.

PROJECT DESCRIPTION: The "Residential Project Site" includes applications CZ1800007, TTM 37439, and PPT 180024. The current zoning classification on the residential Project site is R-1 (One-Family Dwellings). CZ 1800007 proposes to change the zoning classification on the entire residential Project site of 158.18 gross acres from R-1 to R-4 (Planned Residential). TTM 37439 proposes a subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. The density of TTM 37439 is 3.6 dwelling units/acre. PPT 180024 proposes a development plan for 574 single-family residential lots. Five (5) architectural styles have been provided. A minimum 8.96-acre community park will provide the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. PPT 180024 also features landscape buffers, passive open space areas, ten (10) paseos, and approximately 13,264 linear feet (LF) of trails/paseos and 56,417 LF of public street sidewalks.

The "Off-site Project" components consist of the following:

- 10,850 linear feet of 33" and 30" diameter sewer line, which will be approximately 15 feet in depth and will extend from Leon Road midway between Holland and Craig Roads, then proceed 5,780' northwesterly within an Eastern Municipal Water District easement on separately owned property to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW to Tres Lagos Drive, then proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.
- 5,300 linear feet of roadway improvements installed along Holland Road with 8 to 10 foot wide depressed shoulders. No curb, gutter, sidewalks, or streetlights shall be installed. Roadway

improvements will be south of the San Pedro Farms Project (TTM 36467), known as Assessor Parcel Number 466-030-002.

- Temporary Drainage Channels: A total of five (5) temporary drainage channels will be provided for the Project. These are located along Craig Avenue and Eucalyptus Road ROWs. Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.
- The Project has several regional flood control channels that are proposed for the Project that are both within and outside the Project boundary.

See attached Assessor's Parcel Numbers Map.

Pursuant to the Riverside County Rules to Implement the California Environmental Quality Act of 1970, it has been determined that the above referenced project may have a significant effect on the environment and an Environmental Impact Report (EIR) is required.

OPTION TO REVISE PROJECT:
Upon receipt of this notice, the project sponsor may revise the project to avoid or mitigate any adverse impact. If the potential adverse effects are substantially mitigated by the revised project, an EIR shall not be required and a Mitigated Negative Declaration or a Negative Declaration (statement of no significant effect) shall be prepared.

APPEAL:
The staff requirement to prepare an EIR may be appealed to the Planning Commission within ten (10) days of receipt of this notice. The appeal must be made in writing and contain brief discussion of how the project will avoid the environmental effects listed on the attachment. The appeal must be accompanied by: (1) adhesive labels containing the names and addresses of all property owners within a minimum of 600 feet of the project boundaries that total at least 25 different property owners; and (2) the appropriate filing fee. (Refer to the Current Riverside County Planning Department Fee Schedule).

PREPARATION OF THE DRAFT EIR:
It has been determined that the project sponsor is responsible for the preparation of the Draft EIR, and should seek the services of an environmental consulting firm to prepare the draft document.

The Draft EIR must meet the form and content requirements of the Planning Department (see attached sheet for required topics). The sponsor should advise the consultant to meet with the staff on a regular basis to insure an adequate document is prepared in a timely fashion. A preliminary draft shall be submitted for review and if determined acceptable, the consultant will be notified of the appropriate number of final draft copies to be provided for distribution to state and local agencies, and interested parties.

EIR FEES:
The appropriate fee for an EIR (Refer to the Current Riverside County Planning Department Fee Schedule) must be submitted to the Planning Department within thirty (30) days of this Notice.

PROJECT PRESUMED ABANDONED:
Unless the EIR fee and the Draft EIR are submitted within the time periods specified above, the project will be presumed abandoned, and there will be no further processing of the development application(s) by the County of Riverside, and no refund of previously paid filing fees.

PUBLIC SCOPING MEETING:

A SCOPING SESSION has been scheduled before the RIVERSIDE COUNTY PLANNING DIRECTOR in order to bring together and resolve the concerns of affected federal, state and local agencies, the proponent of the proposed project, and other interested persons; as well as inform the public of the nature and extent of the proposed project indicated below, and to provide an opportunity to identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the EIR and help eliminate from detailed study issues found not to be important.

The Scoping Session is not a public hearing on the merit of the proposed project and NO DECISION on the project will be made. Public testimony is limited to identifying issues regarding the project and potential environmental impacts. The project proponent will not be required to provide an immediate response to any concerns raised. The project proponent will be requested to address any concerns expressed at the Scoping Session, through revisions to the proposed project and/or completion of a Final Environmental Impact Report, prior to the formal public hearing on the proposed project. Mailed notice of the public hearing will be provided to anyone requesting such notification.

TIME OF SCOPING SESSION:	1:30 p.m. or as soon as possible
DATE OF SCOPING SESSION:	November 5, 2018
PLACE OF SCOPING SESSION:	County Administrative Center 1st Floor Conference Room 2A 4080 Lemon Street Riverside, CA 92501

An e-copy of the Environmental Assessment No. 38874, which identifies the issues to be studied in the draft EIR, is attached. If you have any questions please contact Russell Brady, Project Planner at (951) 955-3025.

If you have any questions, please contact Russell Brady, Project Planner at (951) 955-3025.

Sincerely,

RIVERSIDE COUNTY PLANNING DEPARTMENT
Charissa Leach, P.E., Assistant TLMA Director

Russell Brady, Project Planner

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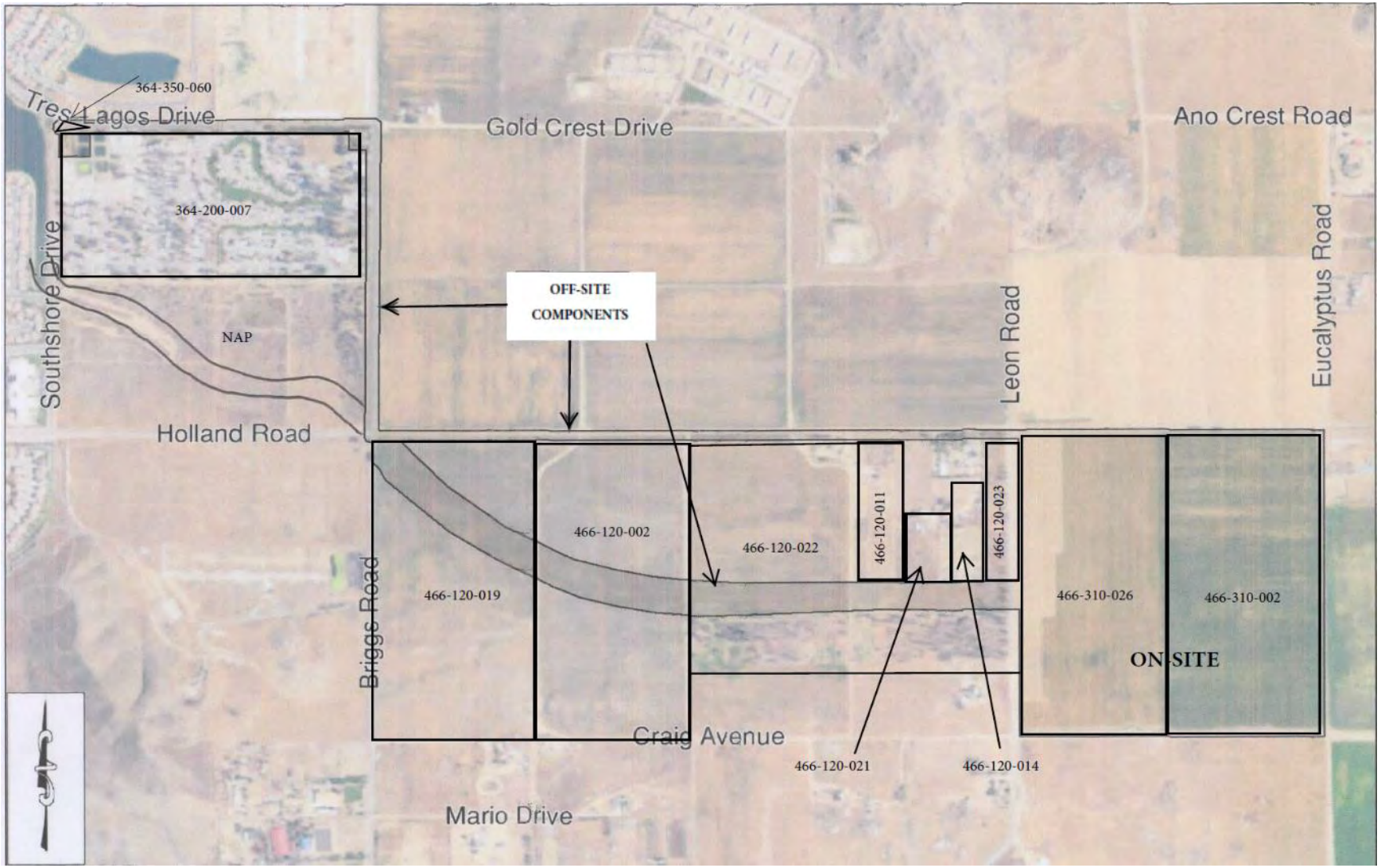
364-350-060
Tres Lagos Drive
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466-310-002
Briggs Road
ON-SITE
Craig Avenue
466-120-021
466-120-014
Mario Drive

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach, P.E.
Assistant TLMA Director

Notice of Preparation of a Draft Environmental Impact Report

DATE: October 8, 2018

TO: Paloma Valley Library
31375 Bradley Road
Menifee, CA 92584

The Riverside County Planning Department is currently reviewing a development application in the Southwest Area Plan of Riverside County. The enclosed environmental documents contain the issues identified to be included in the draft EIR and are provided for public review and comment. **Please place the enclosed documents, together with this cover letter, where the public may review them for the time period indicated below.**

PROJECT CASE NO./TITLE: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439); Plot Plan No. 180024 (PPT 180024).

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side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.

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- Temporary Drainage Channels: A total of five (5) temporary drainage channels will be provided for the Project. These are located along Craig Avenue and Eucalyptus Road ROWs. Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.
- The Project has several regional flood control channels that are proposed for the Project that are both within and outside the Project boundary.

See attached Assessor's Parcel Numbers Map.

LEAD AGENCY:
Riverside County Planning Department
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, CA 92502-1409
Attn: Russell Brady, Project Planner

PROJECT SPONSOR:
Applicant: Sun Holland, LLC
Address: 27127 Calle Arroyo, #1910
San Juan Capistrano, CA 92675

Pursuant to the California Environmental Quality Act, notice is given to responsible and interested agencies, that the Riverside County Planning Department plans to oversee the preparation on an Environmental Impact Report for the above-described project. The purpose of this notice is to solicit guidance from your agency as to the scope and content of the environmental information to be included in the EIR. Information in that regard should be submitted to this office as soon as possible, but **not later than thirty (30) days** after receiving this notice.

PUBLIC SCOPING MEETING:

A SCOPING SESSION has been scheduled before the RIVERSIDE COUNTY PLANNING DIRECTOR in order to bring together and resolve the concerns of affected federal, state and local agencies, the proponent of the proposed project, and other interested persons; as well as inform the public of the nature and extent of the proposed project indicated below, and to provide an opportunity to identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the EIR and help eliminate from detailed study issues found not to be important.

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TIME OF SCOPING SESSION: 1:30 p.m. or as soon as possible
DATE OF SCOPING SESSION: November 5, 2018
PLACE OF SCOPING SESSION: County Administrative Center
1st Floor Conference Room 2A
4080 Lemon Street
Riverside, CA 92501

A copy of the Environmental Assessment No. 38874, which identifies the issues to be studied in the draft EIR, is attached. If you have any questions please contact Russell Brady, Project Planner at (951) 955-3025.

Sincerely,

RIVERSIDE COUNTY PLANNING DEPARTMENT
Charissa Leach, P.E., Assistant TLMA Director

Russell Brady, Project Planner

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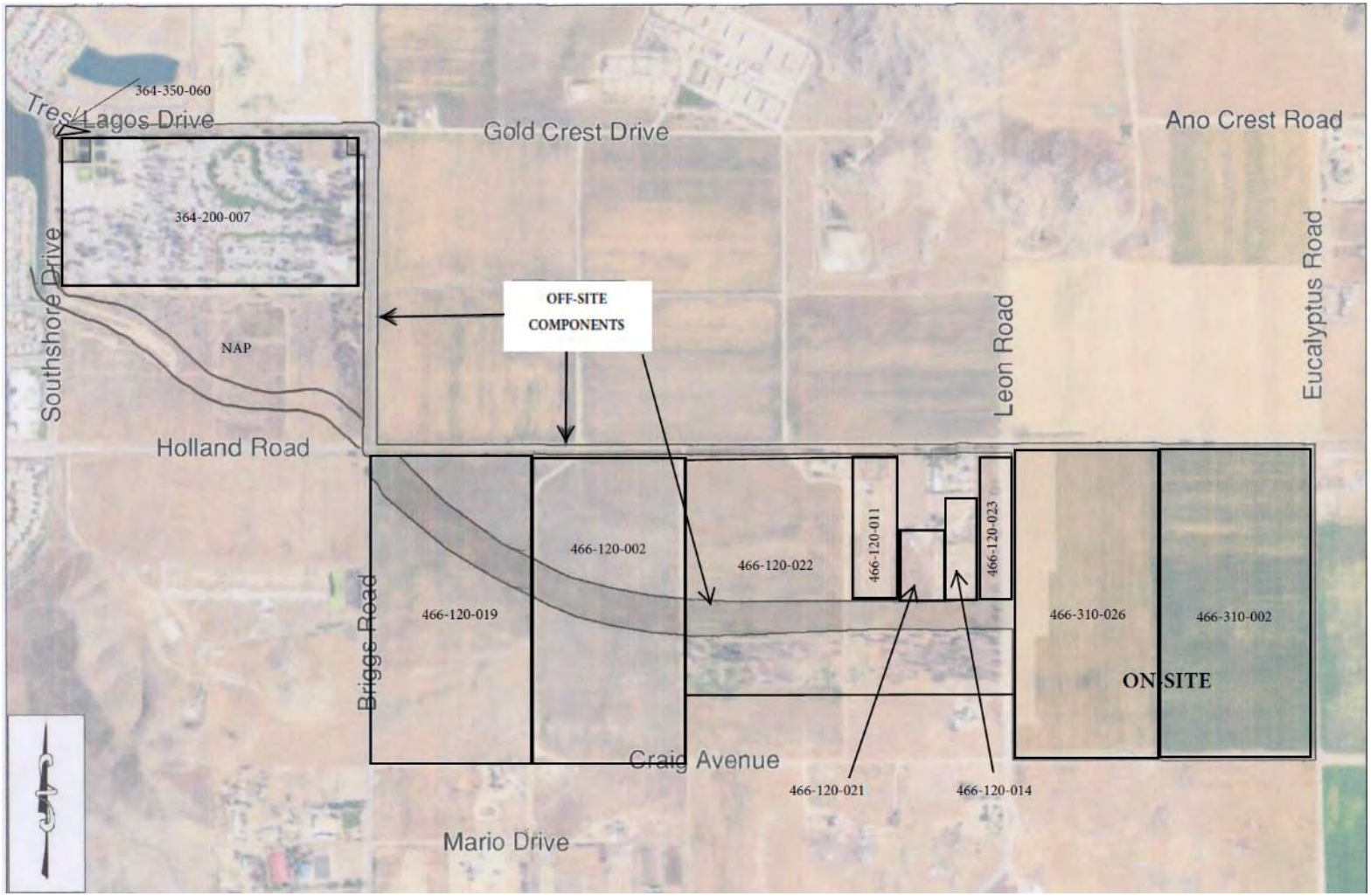
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Craig Avenue
466-120-021
466-120-014
Mario Drive

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach, P.E.
Assistant TLMA Director

Notice of Preparation of a Draft Environmental Impact Report

DATE: October 8, 2018

TO: Riverside Public Library
3581 Mission Inn Avenue
Riverside, CA 92501

The Riverside County Planning Department is currently reviewing a development application in the Southwest Area Plan of Riverside County. The enclosed environmental documents contain the issues identified to be included in the draft EIR and are provided for public review and comment. **Please place the enclosed documents, together with this cover letter, where the public may review them for the time period indicated below.**

PROJECT CASE NO./TITLE: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439); Plot Plan No. 180024 (PPT 180024).

PROJECT LOCATION: The "Residential Project Site" components, which are covered under CZ 1800007 and TTM 37439, and are located west of Eucalyptus Road, north of Craig Avenue, east of Leon Road, and south of Holland Road. The "Off-site Project" components are located generally west of Leon Road and south of Holland Road and then crosses north of Holland Road and west of Briggs Road.

PROJECT DESCRIPTION: The "Residential Project Site" includes applications CZ1800007, TTM 37439, and PPT 180024. The current zoning classification on the residential Project site is R-1 (One-Family Dwellings). CZ 1800007 proposes to change the zoning classification on the entire residential Project site of 158.18 gross acres from R-1 to R-4 (Planned Residential). TTM 37439 proposes a subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. The density of TTM 37439 is 3.6 dwelling units/acre. PPT 180024 proposes a development plan for 574 single-family residential lots. Five (5) architectural styles have been provided. A minimum 8.96-acre community park will provide the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. PPT 180024 also features landscape buffers, passive open space areas, ten (10) paseos, and approximately 13,264 linear feet (LF) of trails/paseos and 56,417 LF of public street sidewalks.

The "Off-site Project" components consist of the following:

- 10,850 linear feet of 33" and 30" diameter sewer line, which will be approximately 15 feet in depth and will extend from Leon Road midway between Holland and Craig Roads, then proceed 5,780' northwesterly within an Eastern Municipal Water District easement on separately owned property to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW to Tres Lagos Drive, then proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south

side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.

- 5,300 linear feet of roadway improvements installed along Holland Road with 8 to 10 foot wide depressed shoulders. No curb, gutter, sidewalks, or streetlights shall be installed. Roadway improvements will be south of the San Pedro Farms Project (TTM 36467), known as Assessor Parcel Number 466-030-002.
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See attached Assessor's Parcel Numbers Map.

LEAD AGENCY:
Riverside County Planning Department
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, CA 92502-1409
Attn: Russell Brady, Project Planner

PROJECT SPONSOR:
Applicant: Sun Holland, LLC
Address: 27127 Calle Arroyo, #1910
San Juan Capistrano, CA 92675

Pursuant to the California Environmental Quality Act, notice is given to responsible and interested agencies, that the Riverside County Planning Department plans to oversee the preparation on an Environmental Impact Report for the above-described project. The purpose of this notice is to solicit guidance from your agency as to the scope and content of the environmental information to be included in the EIR. Information in that regard should be submitted to this office as soon as possible, but **not later than thirty (30) days** after receiving this notice.

PUBLIC SCOPING MEETING:

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4080 Lemon Street
Riverside, CA 92501

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Charissa Leach, P.E., Assistant TLMA Director

Russell Brady, Project Planner

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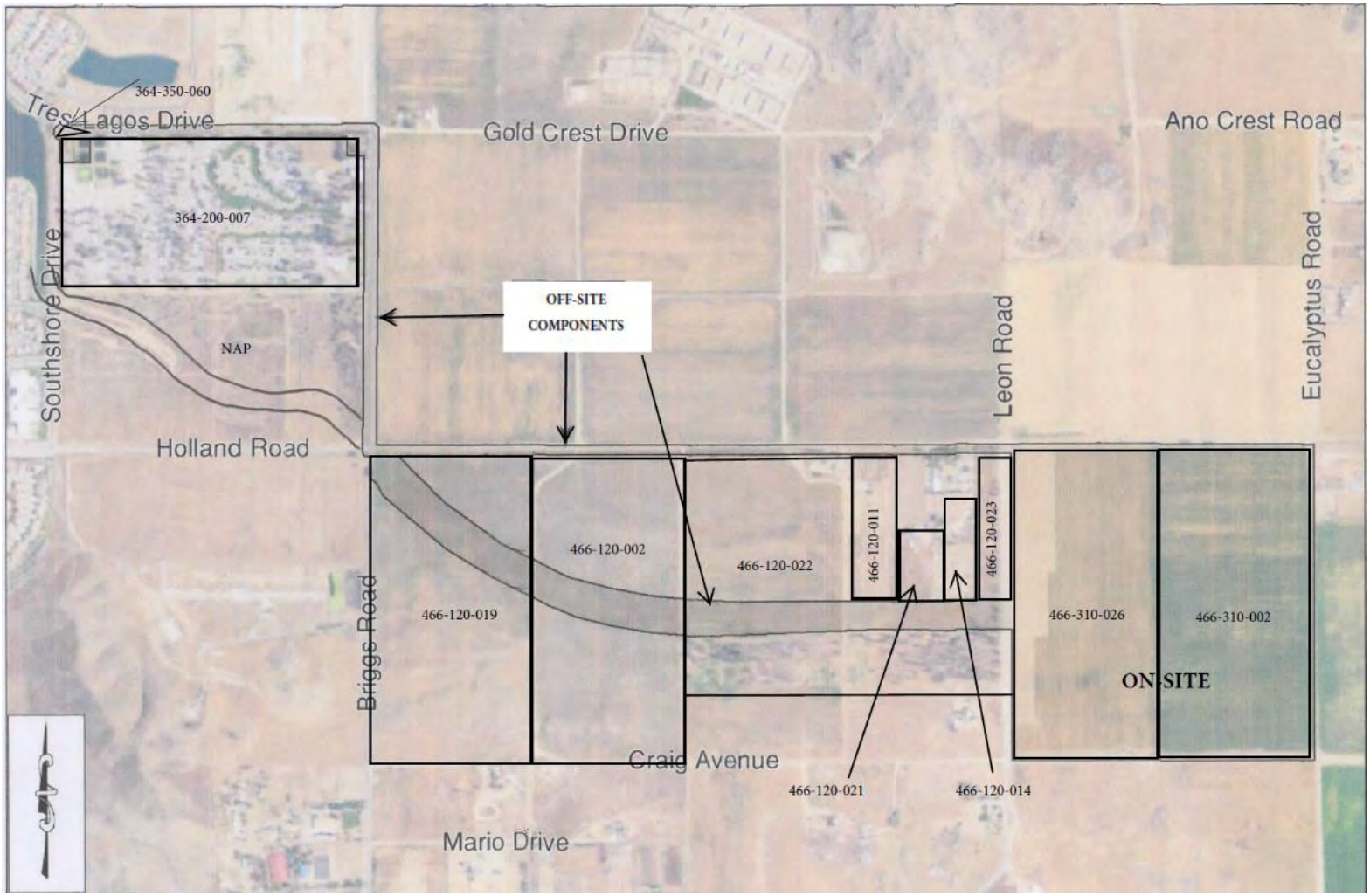
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RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach, P.E.
Assistant TLMA Director

Public Notice of Preparation of a Draft Environmental Impact Report

DATE: October 8, 2018

TO: Distribution List of Surrounding Property Owners

PROJECT CASE NO./TITLE: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439); Plot Plan No. 180024 (PPT 180024).

PROJECT LOCATION: The "Residential Project Site" components, which are covered under CZ 1800007 and TTM 37439, and are located west of Eucalyptus Road, north of Craig Avenue, east of Leon Road, and south of Holland Road. The "Off-site Project" components are located generally west of Leon Road and south of Holland Road and then crosses north of Holland Road and west of Briggs Road.

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Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.

- The Project has several regional flood control channels that are proposed for the Project that are both within and outside the Project boundary.

See attached Assessor's Parcel Numbers Map.

LEAD AGENCY:
Riverside County Planning Department
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, CA 92502-1409
Attn: Russell Brady, Project Planner

PROJECT SPONSOR:
Applicant: Sun Holland, LLC
Address: 27127 Calle Arroyo, #1910
San Juan Capistrano, CA 92675

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DATE OF SCOPING SESSION:	November 5, 2018
PLACE OF SCOPING SESSION:	County Administrative Center 1st Floor Conference Room 2A 4080 Lemon Street Riverside, CA 92501

Environmental Assessment No. 38874 is available on-line at: http://planning.rctlma.org under On Going Projects. Copies also are available at the Riverside Public Library, located at 3581 Mission Inn Avenue, Riverside, CA 92501, and at the Paloma Valley Library, located at 31375 Bradley Road, Menifee, CA 92584. If you have any questions please contact Russell Brady, Project Planner at (951) 955-3025.

Sincerely,

RIVERSIDE COUNTY PLANNING DEPARTMENT
Charissa Leach, P.E., Assistant TLMA Director

Russell Brady, Project Planner
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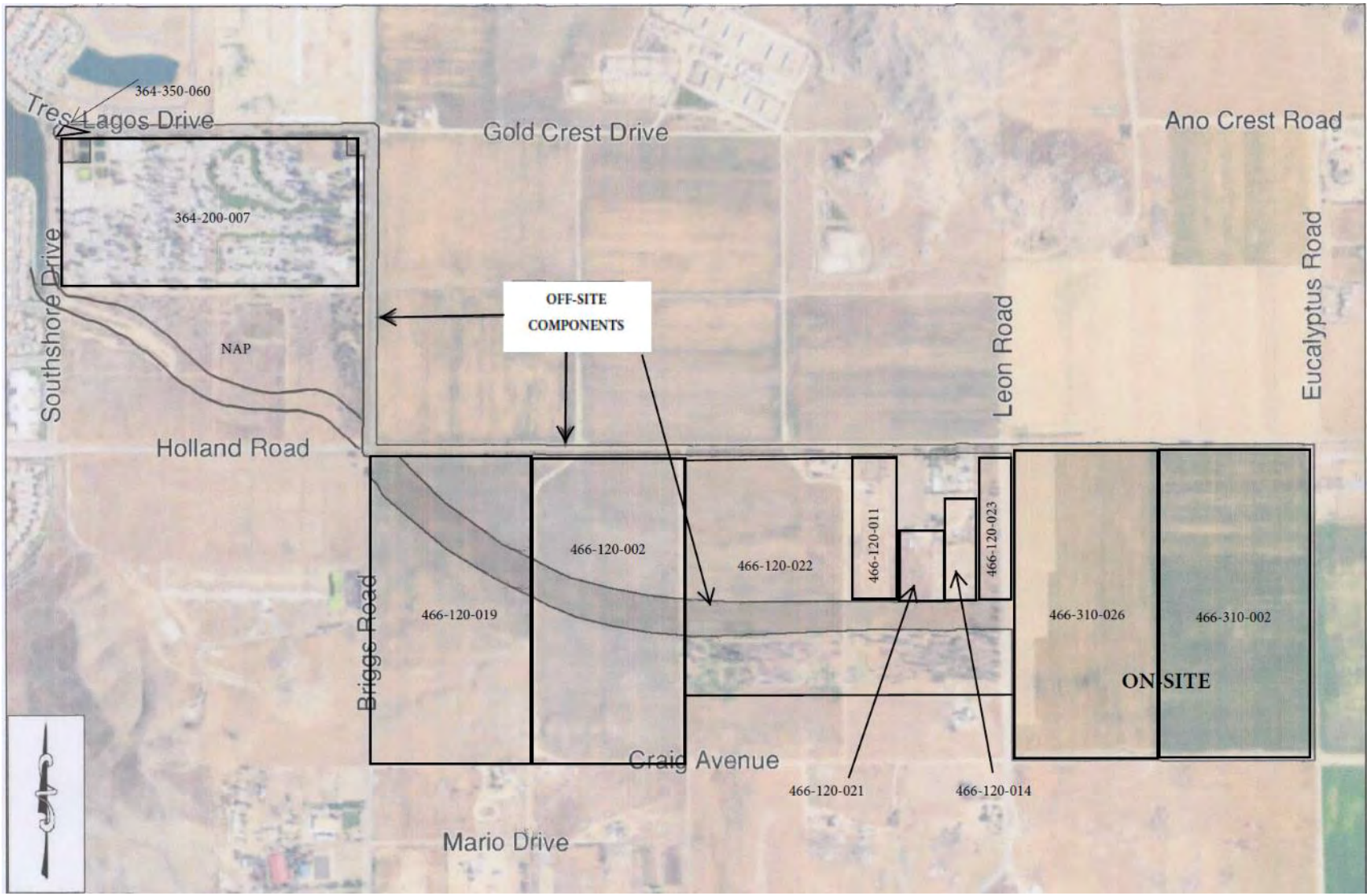
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RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach, P.E.
Assistant TLMA Director

Agency Notice of Preparation of a Draft Environmental Impact Report

DATE: October 8, 2018

TO: Eastern Municipal Water District

PROJECT CASE NO./TITLE: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439); Plot Plan No. 180024 (PPT 180024).

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See attached Assessor's Parcel Numbers Map.

LEAD AGENCY:
Riverside County Planning Department
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, CA 92502-1409
Attn: Russell Brady, Project Planner

PROJECT SPONSOR:
Applicant: Sun Holland, LLC
Address: 27127 Calle Arroyo, #1910
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4080 Lemon Street
Riverside, CA 92501

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Sincerely,

RIVERSIDE COUNTY PLANNING DEPARTMENT
Charissa Leach, P.E., Assistant TLMA Director

Russell Brady, Project Planner
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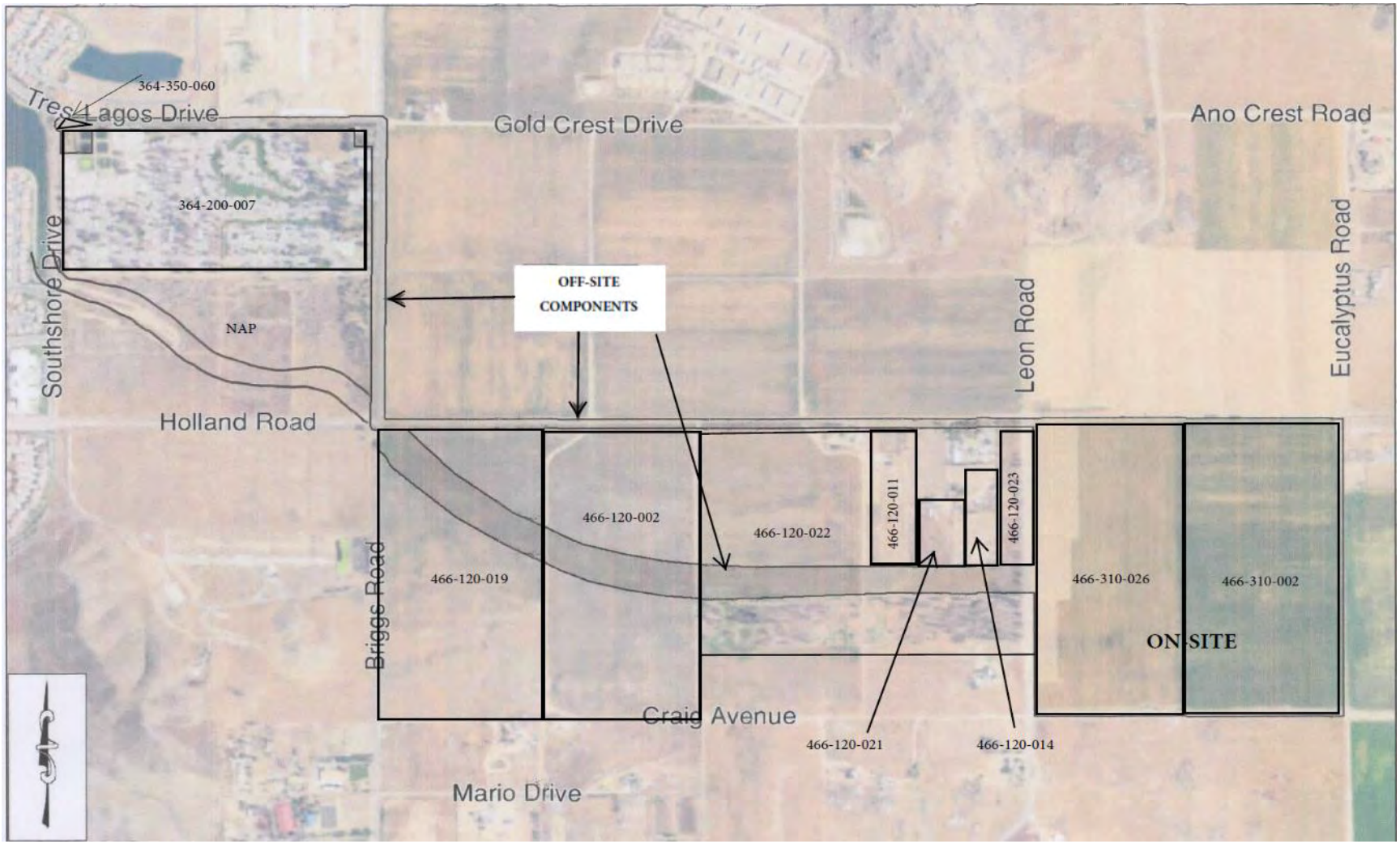
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Local Public Affairs
Southern California Edison
CEQA Review
26100 Menifee Rd.
Menifee, CA 92585

Karen Cadavona - SCE
3rd Party Environmental Review
2244 Walnut Grove Avenue, Quad 4C
472A
Rosemead, CA 91770

California Air Resources Board
CEQA Review
1001 I Street
Sacramento, CA 95814

California Department of Fish &
Wildlife Region # 6
3602 Inland Empire Boulevard, Suite
C-220
Ontario, CA 91764

Frontier Communications
CEQA Review
9 South 4th Street
Redlands, CA 92373

Morongo Band of Mission Indians
Attn: Raymond Huaute
12700 Pumarra Road
Banning, CA 92220

California Department of Transportation
– District 8
CEQA Review
464 West 4th Street
San Bernardino, CA 92401

Eastern Municipal Water District
Attn: Rebecca Tibayan
CEQA Review
P.O. Box 8300
Perris, CA 92572-8300

Pechanga Band of Mission Indians
Attn: Ebru Ozdil, Planning Specialist
CEQA Review
P.O. Box 2183
Temecula, CA 92593

The Gas Company
CEQA Review
527 N. San Jacinto Street
Hemet, CA 92548

Housing and Community Development
CEQA Review
2020 West El Camino Avenue
Sacramento, CA 95833

Soboba Band of Luiseño Indians
CEQA Review
P.O. Box 487
San Jacinto, CA 92581

South Coast Air Quality Management
District
CEQA Review
21865 Copley Drive
Diamond Bar, CA 91765

Winchester-Homeland Municipal
Advisory Council (MAC)
37600 Sky Canyon Drive #505
Murrieta, CA 92563

Santa Ana Regional Water Quality
Control Board (8)
CEQA Review
3737 Main Street, Suite 500
Riverside, CA 92501

Southern California Association of
Governments
CEQA Review
818 W. 7th Street, 12th Floor
Los Angeles, CA 90017

Riverside Transit Agency
CEQA Review
P.O. Box 59968
Riverside, CA 92517-1968

Rincon Band of Luiseño Indians
Attn: Jim McPherson
Cultural Resources Department
1 West Tribal Road
Valley Center, CA 92082

Planning Commissioner: 3rd District-
Ruthanne Taylor- Berger
4080 Lemon Street
Riverside, CA 92501

Sun Holland, LLC
27127 Calle Arroyo, #1910
San Juan Capistrano, CA 92675

Valley-Wide Recreation & Parks District
CEQA Review
901 W Esplanade Avenue
San Jacinto, CA 92582

City of Menifee
Planning Division
CEQA Review
29714 Haun Road
Menifee, CA 92586

City of Hemet
Planning Department
CEQA Review
445 E. Florida Avenue
Hemet, CA 92543

Riverside County Sheriff's Department
CEQA Review
137 N. Perris Blvd, Suite A
Perris, CA 92501

City of Murrieta – Planning Division
CEQA Review
1 Town Square
Murrieta, CA 92562

City of Temecula
CEQA Review
41000 Main Street
Temecula, CA 92590

Menifee Valley Historical Association
Attn: Barbara Spencer
CEQA Review
33751 Zeiders Road
Menifee, CA 92584

Perris Union High School District
CEQA Review
155 East Fourth Street
Perris, CA 92570
Attn: Candace Raines

Menifee Union School District
CEQA Review
29775 Haun Road
Menifee, CA 92586
Attn: Bruce Shaw

Western Riverside County
Regional Conservation Authority
CEQA Review
3403 Tenth Street, Suite 320
Riverside, CA 92501

State of California
Native American Heritage Commission
CEQA Review
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

Board of Supervisors
Supervisor Chuck Washington
Riverside County, Third District
4080 Lemon Street
Riverside, CA 92501

Frontier Communications
CEQA Review
Attn: Maria Kidd
201 Flynn Road
Camarillo, CA 93102

Riverside Public Library
3581 Mission Inn Avenue
Riverside, CA 92501

Paloma Valley Library
31375 Bradley Road
Menifee, CA 92584

State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

PROPERTY OWNERS CERTIFICATION FORM

I, VINNIE NGUYEN certify that on August 15, 2018,

The attached property owners list was prepared by Riverside County GIS,

APN (s) 466-310-002, 026 / 466-120-014, 021, 023, 011, 022, 002, 019 / 364-200-007 for

Company or Individual's Name RCIT - GIS,

Distance buffered 600'

Pursuant to application requirements furnished by the Riverside County Planning Department. Said list is a complete and true compilation of the owners of the subject property and all other property owners within 600 feet of the property involved, or if that area yields less than 25 different owners, all property owners within a notification area expanded to yield a minimum of 25 different owners, to a maximum notification area of 2,400 feet from the project boundaries, based upon the latest equalized assessment rolls. If the project is a subdivision with identified off-site access/improvements, said list includes a complete and true compilation of the names and mailing addresses of the owners of all property that is adjacent to the proposed off-site improvement/alignment.

I further certify that the information filed is true and correct to the best of my knowledge. I understand that incorrect or incomplete information may be grounds for rejection or denial of the application.

TITLE: GIS Analyst

ADDRESS: 4080 Lemon Street 9TH Floor

Riverside, Ca. 92502

TELEPHONE NUMBER (8 a.m. – 5 p.m.): (951) 955-8158

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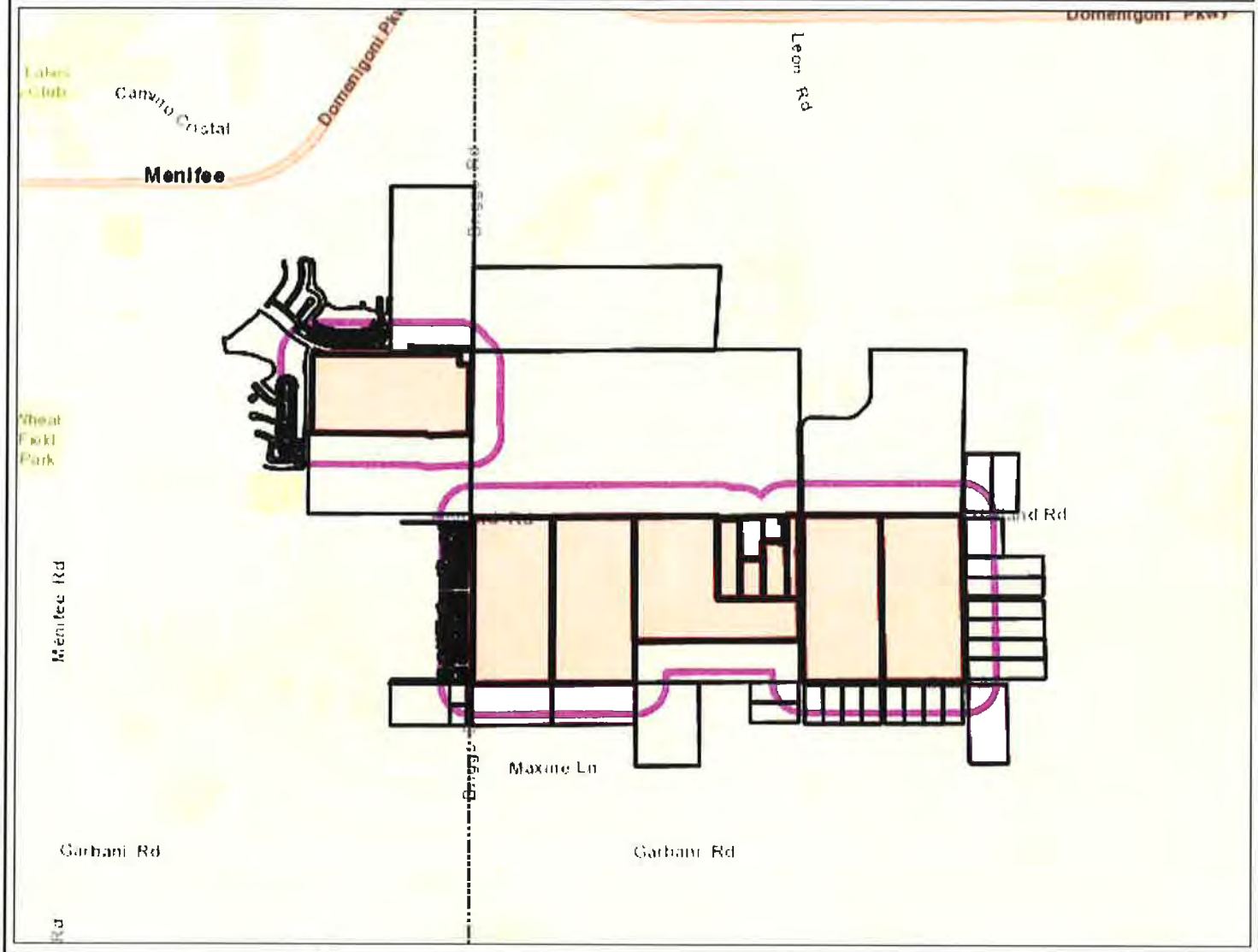
(600 feet buffer)



Legend

- County Boundary
- Cities
- World Street Map

Notes

0 3,009 6,019 Feet

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5311 AVENUE 272
VISALIA CA 93277

466350007
THOMAS E HASEGAWA
AMY HASEGAWA
P O BOX 28511
SAN DIEGO CA 92198

466020006
JMB LEGACY PROP
30490 BRIGGS RD
MENIFEE CA. 92584

466030002
JMB LEGACY PROP
30490 BRIGGS RD
MENIFEE CA 92584

364350058
LAKES COMMUNITY ASSN
C/O C/O KEYSTONE PACIFIC PROP MGMNT
16775 VON KARMAN STE 100
IRVINE CA 92606

364260065
LAKES COMMUNITY ASSN
C/O C/O PRIME ASSN SERVICES INC
655 CAM DE LOS MARES 117
SAN CLEMENTE CA 92673

364260001
GARRETT R HINMON
MADELINE HINMON
29493 STARRING LN
MENIFEE CA 92584

372090033
BRIARCLIFF RANCH
28565 E VALLEJO AVE
TEMECULA CA 92592

466120014
MARTA LUCRETIA VERNOLA PURMER
MICHELLE TERESA THURMAN
SHANA MARIE OWENS
C/O MICHELLE T THURMAN
5221 DEL NORTE CIR
LA PALMA CA 90623

364350035
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

466120020
CORNELIO ANGELA LIVING TRUST
2262 SALT AIR DR
SANTA ANA CA 92705

466320038
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466130035
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GIGI ADRIANNE SULLIVAN
31615 LEON RD
WINCHESTER CA. 92596

466320039
HALLBERG RANCH DUPLICATE
2142 WENTE CT
SAN JACINTO CA 92583

466310021
RONALD AUERBACHER
OMNI FINANCIAL
ORBIS FINANCIAL

3606 FRONT ST
SAN DIEGO CA 92103

466320043
HALLBERG RANCH DUPLICATE
2142 WENTE CT
SAN JACINTO CA 92583

466320028
CRAIG 435
C/O C/O ANDY DOMENIGONI
33011 HOLLAND RD
WINCHESTER CA 92596

466310022
KASIN CHAI
ORANEE CHAI
1101 TIMERLINE LN
SANTA ANA CA 92705

364310021
DUSTEN L OLLOM
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30694 ALSTON LN
MENIFEE CA. 92584

466310019
RONALD AUERBACHER
OMNI FINANCIAL DUPLICATE
ORBIS FINANCIAL

3606 FRONT ST
SAN DIEGO CA 92103

466310017
TIA KIM NGO
JAMES W HARRIS
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466120017
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JEFFREY B NIGHTSWONGER
JUAN MEJIA DUPLICATE
C/O MICHELLE T THURMAN
5221 DEL NORTE CIR
LA PALMA CA 90623

466120024
JOHN W BOERE
DENISE BOERE
3909 MARSALA WAY
MODESTO CA 95356

466130018
THOMAS A LIGUORI
C/O NO 300
16885 VIA DEL CAMPO
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GARY R TERRY
BARBARA TERRY
30610 ALSTON LN
MENIFEE CA 92584

364310083
BRUCE E WOODS
EBONY M E WOODS
30673 ALSTON LN
MENIFEE CA. 92584

364310034
REUBEN R AVALOS
DARBY AVALOS
29444 GLENHURST CIR
MENIFEE CA. 92584

364310081
THOMAS J DALY
30697 ALSTON LN
MENIFEE CA. 92584

364310097 DUPLICATE
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364310036
TRAVIS M LEACH
TAMRA S LEACH
29468 GLENHURST CIR
MENIFEE CA. 92584

364310028
MARK SANCHEZ
JOELLEN SANCHEZ
29451 BOURIS DR
MENIFEE CA. 92584

364310035
DESMOND WHITFIELD
ERICKA M WHITFIELD
29456 GLENHURST CIR
MENIFEE CA. 92584

364310038
DONALD C JONES
MICHELLE JONES
29492 GLENHURST CIR
MENIFEE CA. 92584

364310023
MAUREEN G BRAY
30718 ALSTON LN
MENIFEE CA. 92584

364310020
IVAN A ZUPKOFSKA
DANITA L ZUPKOFSKA
30682 ALSTON LN
MENIFEE CA 92584

364310027
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29463 BOURIS DR
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MENIFEE CA. 92584

466130019
LISA TORP
DAVID MARINO
CARLA EDWARDS

30300 MARINO DR
MENIFEE CA. 92584

466120021
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KATHY E NIGHSWONGER
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466130002
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PHYLLIS ANNE TRIGG
204 22ND ST
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364190004
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CAROL ANN JONES
FRDERICK ARNOLD ABACHERLI

30719 WAVE CREST CIR
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81485 CAMINO MONTEVIDEO
INDIO CA 92203

364310082
NATHAN STEPHENS
30685 ALSTON LN
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466120011
CAROLE SCHWARTZ
2503 MONARCH TERRACE DR
KATY TX 77494

364200007
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CHICAGO IL 60606

364190005
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JASON BERNI
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364310013
EPHRAIM DASHON LANGLEY
MELISSA LEON LANGLEY
30598 ALSTON LN
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HUA SUN
YING LI
3111 BAYBERRY RD
AMES IA 80014

364310011
JAMES A CORNWELL
CONSTANCE J CORNWELL
30574 ALSTON LN
MENIFEE CA 92584

364310066
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ANDREW F MORCOS
30745 ALSTON LN
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364310025
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2228 GRANBY WAY
SAN MARCOS CA 92078

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CAITLIN H CAMILO
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364310007
LORELIE M ENRIQUEZ
30601 ALSTON LN
MENIFEE CA 92584

364200009
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C/O C/O KATHIE WESTROPE
41391 KALMIA ST NO 200
MURRIETA CA 92562

364310017
JEFFREY KAHN
ENID J KAHN
30646 ALSTON LN
MENIFEE CA. 92584

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TRACY J GULLETT
30733 ALSTON LN
MENIFEE CA. 92584

364310009
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PARIA JAIME
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PAULA M GUNDREY
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364310019
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PRISCILLA BARONGAN
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MENIFEE CA. 92584

364310030
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WAYNE R BAIGENT
1350 ALONZO DR
EL CAJON CA 92021

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41505 VIA DEL MONTE
TEMECULA CA 92592

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ROBIN L BURCHFIELD
29480 GLENHURST CIR
MENIFEE CA. 92584

364310039
BRANDON FINN
NICOLE FINN
29495 GLENHURST CIR
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364310012
JOSHUA C MEYER
CAROLINA MEYER
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980 MONTECITO DR STE 302
CORONA CA 92879

364350059
LAKES COMMUNITY ASSN
C/O C/O KEYSTONE PACIFIC PROP MGMNT
16775 VON KARMAN STE 100
IRVINE CA 92606

364350042
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350047
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350045
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350043
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350051
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350009
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350008
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350010
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350013
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350014
LENNAR HOME OF CALIF INC
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TUSTIN CA 92780

466120002
JMB LEGACY PROP
30490 BRIGGS RD
MENIFEE CA 92584

466320044
HALLBERG RANCH
2142 WENTE CT
SAN JACINTO CA 92583

466120019
JMB LEGACY PROP
30490 BRIGGS RD
MENIFEE CA 92584

466120022
JMB LEGACY PROP
30490 BRIGGS RD
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364190005
JEANETTE M SUTHERLIN
CAROL ANN JONES
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30719 WAVE CREST CIR
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364200007
NATIONAL AMERICAN CORP
C/O C/O B AND D EQUITY PROPERTY TAX
P O BOX 06115
CHICAGO IL 60606

364200003
JMB LEGACY PROP
30490 BRIGGS RD
MENIFEE CA 92584

364310082
NATHAN STEPHENS
30685 ALSTON LN
MENIFEE CA. 92584

364200015
LAKES COMMUNITY ASSN
C/O C/O LEEANNE BROCK
81485 CAMINO MONTEVIDEO
INDIO CA 92203

364260064
LAKES COMMUNITY ASSN
C/O C/O PRIME ASSN SERVICES INC
655 CAM DE LOS MARES 117
SAN CLEMENTE CA 92673

364310024
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CHARI L ISRANI
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16775 VON KARMAN STE 100
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364350041
LENNAR HOME OF CALIF INC
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CORONA CA 92879

364350046
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350037
LENNAR HOME OF CALIF INC
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364350012
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364350016
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364350039
LENNAR HOME OF CALIF INC
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CORONA CA 92879

364350054
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350015
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980 MONTECITO DR STE 302
CORONA CA 92879

364350052
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350007
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350005
LENNAR HOME OF CALIF INC
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364350055
LENNAR HOME OF CALIF INC
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364350056
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350011
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350003
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350048
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350004
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350002
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350049
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350040
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350006
LENNAR HOME OF CALIF INC
980 MONTECITO DR STE 302
CORONA CA 92879

364350017
LENNAR HOME OF CALIF INC
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C/O C/O KEYSTONE PACIFIC PROP MGMNT
16775 VON KARMAN STE 100
IRVINE CA 92606

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CORONA CA 92879

372552019
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

372570016
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

372570003
PARDEE HOMES
177 E COLORADO BLV NO 500
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372562013
PARDEE HOMES
177 E COLORADO BLV NO 500
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372562022
PARDEE HOMES
177 E COLORADO BLV NO 500
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372561013
PARDEE HOMES
177 E COLORADO BLV NO 500
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372571023
PARDEE HOMES
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PASADENA CA 91105

372554024
PARDEE HOMES
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PASADENA CA 91105

372562023
PARDEE HOMES
177 E COLORADO BLV NO 500
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372552016
PARDEE HOMES
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372563004
PARDEE HOMES
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372554022
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

372553003
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

372552011
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

372571033
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

372563011
PARDEE HOMES
177 E COLORADO BLV NO 500
PASADENA CA 91105

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APPENDIX 8.2

NOP COMMENT LETTERS AND SCOPING MEETING COMMENTS

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

October 8, 2018

To: Reviewing Agencies

Re: TTM 37439 - Canterwood
SCH# 2018101010

Attached for your review and comment is the Notice of Preparation (NOP) for the TTM 37439 - Canterwood draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Russell Brady
Riverside County
4080 Lemon Street, 12th Floor
Riverside, CA 92502-1409

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2018101010
Project Title TTM 37439 - Canterwood
Lead Agency Riverside County

Type NOP Notice of Preparation

Description The proposed project includes Change of Zone No. 1800007 (CZ 1800007), Plot Plan No. 180024 (PPT180024), and Tentative Tract Map No. 37439 (TTM 37439), as well as off-site roadway, drainage, and sewer improvements to serve the project.
CZ 1800007 proposes to change the zoning classification on the entire residential project site of 158.18 gross acres from R-1 to R-4 (Planned Residential).
TTM 37439 proposes a subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of project roadways. The density of TTM 37439 is 3.6 dwelling units/acre.
PPT 180024 proposes a total of 574 single-family residential lots. Canterwood includes 4 individual neighborhoods, with min lots sizes of 4,700 sf, 5,000 sf, 5,500 sf, and 6,500 sf. 5 architectural styles have been provided. The centerpiece of the community is a min 8.96-acre community park located in northwest portion of the project. Canterwood also features landscape buffers, passive open space areas, 10 paseos, and approx 13,264 lf of trails/paseos and 56,417 lf of public street sidewalks.

Lead Agency Contact

Name Russell Brady
Agency Riverside County
Phone 951-955-3025 **Fax**
email
Address 4080 Lemon Street, 12th Floor
City Riverside **State** CA **Zip** 92502-1409

Project Location

County Riverside
City Menifee
Region
Cross Streets Leon Rd and Holland Rd
Lat / Long 33° 39' 42.5" N / 117° 7' 29.0" W
Parcel No.
Township 6 **Range** 2 **Section** 8 **Base** Romoland

Proximity to:

Highways Hwy 79
Airports
Railways
Waterways
Schools Southshore ES
Land Use LU - vacant/Z - One family dwellings & light ag/GP - Medium & estate density res

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Landuse; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian

Reviewing Agencies Resources Agency; Department of Conservation; Cal Fire; Office of Historic Preservation; Department of Parks and Recreation; Department of Fish and Wildlife, Region 6; Office of Emergency Services, California; Department of Housing and Community Development; Native American Heritage Commission; California Highway Patrol; Caltrans, District 8; Air Resources Board; State Water Resources Control Board, Division of Drinking Water; Regional Water Quality Control Board, Region 8

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 10/08/2018 ***Start of Review*** 10/08/2018 ***End of Review*** 11/06/2018

Note: Blanks in data fields result from insufficient information provided by lead agency.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2018101010

Project Title: TTM 37439 - Canterwood

Lead Agency: Riverside County Planning Department | Contact Person: Russell Brady
Mailing Address: 4080 Lemon Street, 12th Floor | Phone: 951-955-3025
City: Riverside | Zip: 92502 | County: Riverside

Project Location: County: Riverside | City/Nearest Community: Menifee
Cross Streets: Leon Road and Holland Road | Zip Code: 92596
Longitude/Latitude (degrees, minutes and seconds): 33 ° 39 ′ 42.5 ″ N / 117 ° 7 ′ 29.0 ″ W Total Acres: 158
Assessor's Parcel No.: See Project Description Attached | Section: 8 | Twp.: 6 | Range: 2 | Base: Romoland
Within 2 Miles: State Hwy #: HWY 79 | Waterways: N/A
Airports: N/A | Railways: N/A | Schools: Southshore Elementary

Document Type:

CEQA: ☒ NOP ☐ Draft EIR | NEPA: ☐ NOI | Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR | ☐ EA | ☐ Final Document
☐ Neg Dec (Prior SCH No.) _____ | ☐ Draft EIS | ☐ Other: _____
☐ Mit Neg Dec Other: Initial Study | ☐ FONSI

Governor's Office of Planning & Research
OCT 05 2018
STATE CLEARINGHOUSE

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☒ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☒ Land Division (Subdivision, etc.) ☐ Other: _____

Development Type:

☒ Residential: Units 574 Acres 79.5
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: Open Space 29.5 AC / Roads 45.6 AC / Basins 7.2 AC

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☒ Recreation/Parks ☒ Vegetation
☒ Agricultural Land ☒ Flood Plain/Flooding ☒ Schools/Universities ☒ Water Quality
☒ Air Quality ☒ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☒ Archeological/Historical ☒ Geologic/Seismic ☒ Sewer Capacity ☒ Wetland/Riparian
☒ Biological Resources ☒ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☒ Noise ☒ Solid Waste ☒ Land Use
☐ Drainage/Absorption ☒ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☒ Public Services/Facilities ☒ Traffic/Circulation ☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

Land Use - Vacant / Zoning - One-Family Dwellings & Light Agriculture / General Plan - Medium & Estate Density Residential

Project Description: *(please use a separate page if necessary)*

See Attached.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

NOP Distribution List

County: Riverside

SCH# 2018101010

esources Agency

- ☐ **Resources Agency**
  Nadell Gayou
- ☐ **Dept. of Boating & Waterways**
  Denise Peterson
- ☐ **California Coastal Commission**
  Allyson Hitt
- ☐ **Colorado River Board**
  Elsa Contreras
- ■ **Dept. of Conservation**
  Crina Chan
- ■ **Cal Fire**
  Dan Foster
- ☐ **Central Valley Flood Protection Board**
  James Herota
- ■ **Office of Historic Preservation**
  Ron Parsons

Dept of Parks & Recreation
Environmental Stewardship Section

- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve Goldbeck
- ☐ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

Fish and Game

- ☐ **Depart. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Wildlife Region 1**
  Curt Babcock
- ☐ **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- ☐ **Fish & Wildlife Region 2**
  Jeff Drongesen
- ☐ **Fish & Wildlife Region 3**
  Craig Weightman
- ☐ **Fish & Wildlife Region 4**
  Julie Vance
- ☐ **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- ■ **Fish & Wildlife Region 6**
  Tiffany Ellis
  Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6 I/M**
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Wildlife M**
  William Paznokas
  Marine Region

Other Departments

- ☐ **California Department of Education**
  Lesley Taylor
- ■ **OES (Office of Emergency Services)**
  Monique Wilber
- ☐ **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- ☐ **Dept. of General Services**
  Cathy Buck
  Environmental Services Section
- ■ **Housing & Comm. Dev.**
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Erik Vink
- ☐ **Delta Stewardship Council**
  Anthony Navasero
- ☐ **California Energy Commission**
  Eric Knight
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☐ **Public Utilities Commission**
  Supervisor
- ☐ **Santa Monica Bay Restoration**
  Guangyu Wang
- ☐ **State Lands Commission**
  Jennifer Deleong
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Cal State Transportation Agency CalSTA

- ☐ **Caltrans - Division of Aeronautics**
  Philip Crimmins
- ☐ **Caltrans – Planning HQ LD-IGR**
  Christian Bushong
- ■ **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ☐ **Caltrans, District 3**
  Susan Zanchi
- ☐ **Caltrans, District 4**
  Patricia Maurice
- ☐ **Caltrans, District 5**
  Larry Newland
- ☐ **Caltrans, District 6**
  Michael Navarro
- ☐ **Caltrans, District 7**
  Dianna Watson
- ■ **Caltrans, District 8**
  Mark Roberts
- ☐ **Caltrans, District 9**
  Gayle Rosander
- ☐ **Caltrans, District 10**
  Tom Dumas
- ☐ **Caltrans, District 11**
  Jacob Armstrong
- ☐ **Caltrans, District 12**
  Maureen El Harake

Cal EPA

Air Resources Board

- ■ **Airport & Freight**
  Jack Wursten
  - ☐ **Transportation Projects**
    Nesamani Kalandiyur
  - ☐ **Industrial/Energy Projects**
    Mike Tollstrup
- ☐ **California Department of Resources, Recycling & Recovery**
  Kevin Taylor/Jeff Esquivel
- ☐ **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- ■ **State Water Resources Control Board**
  Cindy Forbes – Asst Deputy
  Division of Drinking Water
- ☐ **State Water Resources Control Board**
  Div. Drinking Water #_____
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ☐ **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- ☐ **Dept. of Toxic Substances Control Reg. #**_____
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ☐ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☐ **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- ☐ **RWQCB 5S**
  Central Valley Region (5)
  - ☐ **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- ☐ **RWQCB 6**
  Lahontan Region (6)
  - ☐ **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- ☐ **RWQCB 7**
  Colorado River Basin Region (7)
- ■ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

- ☐ **Other** _____
  _____
  _____
- ☐ _____
  Conservancy

Last Updated 5/22/18

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

October 12, 2018

Russell Brady
Riverside County
4080 Lemon Street, 12th Floor
Riverside, CA 92502-1409

RE: SCH#2018101010 TTM 37439 – Canterwood Draft Environmental Impact Report (EIR), Riverside County

Dear Mr. Brady:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides 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). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

for Katy Sanchez
Associate Environmental Planner

cc: State Clearinghouse

State of California • Natural Resources Agency
Department of Conservation
Division of Land Resource Protection
801 K Street • MS 14-15
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Edmund G. Brown Jr., *Governor*
Clayton Haas, *Acting Director*

October 19, 2018

VIA EMAIL: RBRADY@RIVCO.ORG
Mr. Russell Brady
Riverside County
4080 Lemon Street, 12 Floor
Riverside, CA 92502-1409

Dear Mr. Brady:

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CANTERWOOD TTM 37439 PROJECT, SCH# 2018101010

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has received the Notice of Preparation of a Draft Environmental Impact Report for the Canterwood TTM 37439 Project sent by Riverside County (County). The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

Project Description

The proposed project includes Change of Zone No. 1800007 (CZ 1800007), Plot Plan No. 180024 (PPT180024), and Tentative Tract Map No. 37439 (TTM 37439), as well as off-site roadway, drainage, and sewer improvements to serve the project. CZ 1800007 proposes to change the zoning classification on the entire residential project site of 158.18 gross acres from R-1 to R-4 (Planned Residential). TTM 37439 proposes a subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, nine drainage basin lots, and 45.6 acres of project roadways. The density of TTM 37439 is 3.6 dwelling units/acre. PPT 180024 proposes a total of 574 single-family residential lots. Canterwood includes four individual neighborhoods with the centerpiece of the community being a 8.96-acre community park located in northwest portion of the project. Currently the project site contains Prime Farmland, and Farmland of Statewide Importance, as classified by the Department of Conservation's Farmland Mapping and Monitoring Program.[1]

Department Comments

The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources. Under CEQA, a lead agency should not approve a project if there are feasible alternatives or feasible mitigation measures available that would lessen the

[1] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, California Important Farmland Finder, https://maps.conservation.ca.gov/DLRP/CIFF/, 2016.

significant effects of the project.[2] A measure brought to the attention of the lead agency should not be left out unless it is infeasible based on its elements.

Agricultural conservation easements on land of at least equal quality and size can mitigate the project impacts in accordance with CEQA Guideline § 15370. The Department highlights agricultural conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA. Agricultural conservation easements are an available mitigation tool and should always be considered.

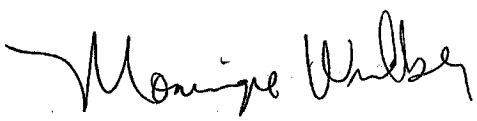
Conclusion

The Department recommends the following discussion under the Agricultural Resources section of the DEIR:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measure for all impacted agricultural lands within the proposed project area.

Thank you for giving us the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Canterwood TTM 37439 Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Environmental Planner at (916) 324-7347 or via email at Farl.Grundy@conservation.ca.gov.

Sincerely,



Monique Wilber
Conservation Program Support Supervisor

[2] California Environmental Quality Act Statute and Guidelines, Association of Environmental Professionals, 2017, Section 21002, page 2.

From: Gibson, Joanna@Wildlife <Joanna.Gibson@wildlife.ca.gov>
Sent: Friday, November 02, 2018 2:03 PM
To: Brady, Russell
Cc: Baez, Ken; Heather.Pert; state.clearinghouse@opr.ca.gov
Subject: CDFW comments on the NOP of DEIR for the Canterwood Project, SCH No. 2018101011
Attachments: Final Findings June 04.pdf

Mr. Russell Brady
Riverside County
4080 Lemon Street, 12th Floor
Riverside, CA 92502-1409

Dear Mr. Brady,

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the County of Riverside (County) for the Canterwood Project (Project; State Clearinghouse No. 2018101011) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Based on review of the NOP, CDFW offers the following comments and recommendations:

Findings of Fact (a), on page 76 of the Initial Study (IS) incorrectly states "There is no Natural Conservation Community Plan [NCCP]…applicable to the Project site." The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is an approved NCCP, as well as an approved Habitat Conservation Plan (HCP): CDFW issued NCCP Approval and Take Authorization for the Western Riverside County MSHCP per section 2800 *et seq.*, of the California Fish and Game Code on June 22, 2004 (see attached NCCP Permit 2835-2003-001-06). CDFW recommends that the DEIR accurately identify that the Western Riverside County MSHCP is an adopted NCCP (as well as an adopted HCP).

The IS does not explicitly state the biological surveys that will be completed on the Project site, nor does it identify those surveys that are required to satisfy the policies and procedures of the MSHCP. MSHCP policies and procedures that apply to the proposed Project include: Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP section 6.1.2), Protection of Narrow Endemic Plant Species (MSHCP section 6.1.3), and Additional Survey Needs and Procedures for burrowing owl. Please note that the DEIR needs to address how the proposed project will affect the policies and procedures of the MSHCP. Therefore, all surveys required by the MSHCP policies and procedures listed above to determine consistency with the MSHCP should be conducted and results included in the DEIR so that CDFW can adequately assess whether the Project will impact the MSHCP.

CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Canterwood Project (SCH No. 2018101011) and recommends that the County of Riverside address

CDFW's comments in the forthcoming DEIR. If you should have any questions pertaining to these comments please feel free to contact me.

Sincerely,

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Attachment to Letter 4

CALIFORNIA DEPARTMENT OF FISH AND GAME

FINDINGS OF FACT
under the
CALIFORNIA ENVIRONMENTAL QUALITY ACT
and the
NATURAL COMMUNITY CONSERVATION PLANNING ACT

AND

NATURAL COMMUNITY CONSERVATION PLAN
PERMIT

for the

Western Riverside County
Multiple Species Habitat Conservation Plan

June 2004

NCCP PERMIT
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1.0 INTRODUCTION

This document sets forth findings and authorizations of the California Department of Fish and Game ("**CDFG**") for the Western Riverside County Multiple Species Habitat Conservation Plan ("**MSHCP**"). CDFG is acting as a responsible agency under the California Environmental Quality Act, Public Resources Code Section 21000 et seq. ("**CEQA**"), in approving the MSHCP as provided for in the Natural Community Conservation Planning Act, Fish and Game Code Sections 2800-2835[1] ("**NCCPA**"). Unless otherwise noted, capitalized terms have the same definitions as in the MSHCP.

1.1. The Natural Community Conservation Planning Act

The NCCPA provides for the preparation and implementation of large-scale natural resource conservation plans as an alternative to reviewing impacts of urban development on a project-by-project and species-by-species basis. A natural community conservation plan ("**NCCP**") must provide for "the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level" (§2820, subd. (a)(3)) while allowing "compatible and appropriate economic development, growth, and other human uses" (§2805, subd. (h)). When it approves an NCCP, CDFG may authorize the "take" of species whose conservation and management is provided for in the NCCPA (§2835), including species listed as endangered, threatened, or candidate under the California Endangered Species Act, Sections 2050-2116 ("**CESA**").

The NCCPA was originally enacted in 1991;[2] was amended in 1993,[3] 1994,[4] 1996[5] and 2000.[6] The NCCPA was substantially revised in 2002 by Senate Bill 107,[7] which codified a number of CDFG's administrative standards and practices for NCCP development and implementation and added new requirements. With the revisions, many of the substantive standards and mandatory elements for an NCCP formerly contained in guidelines prepared by CDFG are now found in Section 2820. The revised NCCPA also "grandfathered" a number of NCCPs that were under development prior to enactment of the 2002 revisions. For an NCCP that falls under one of the grandfathering provisions in Section 2830, like the Western Riverside MSHCP, CDFG must evaluate the adequacy of NCCP by reference to earlier versions of the NCCPA and to the guidelines issued under those earlier statutes (See Finding 4.1 of this document for further details). For that reason, a number of the section references below to the NCCPA will be to

[1] All further section references are to the Fish and Game Code, unless otherwise indicated.
[2] Statutes 1991, chapter 765, section 2, page 3424 (A.B. 2172).
[3] Statutes 1993, chapter 708, section 1, page 4034 (S.B. 755).
[4] Statutes 1994, chapter 220, section 1, page 1778 (S.B. 1352).
[5] Statutes 1996, chapter 593, sections 1 and 2, page 2702 (A.B. 3446).
[6] Statutes 2000, chapter 87, sections 1-3, page 1207 (S.B. 1679).
[7] Statutes 2002, chapter 4, sections 1 and 2, page 81 (S.B. 107). Minor housekeeping changes were subsequently enacted as part of S.B. 2052 (Stats. 2002, ch. 133, §§ 1 and 2, page 568).

former sections that, although replaced by new provisions in 2002, still set forth the relevant standards for grandfathered NCCPs under existing law.[8]

1.2. Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan/NCCP Plan (Volumes I-IV) ("**MSHCP**" or "**Plan**"), is a comprehensive habitat conservation planning program that addresses multiple species' habitat needs and the preservation of native vegetation communities for a 1.26 million acre area in western Riverside County. It is a regional habitat plan intended to contribute to preservation of regional biodiversity through coordination with other habitat conservation planning efforts throughout southern California. The MSHCP allows local jurisdictions to maintain land use control and development flexibility by planning and implementing a regional preserve system that can meet future public and private project mitigation needs. The Plan is also designed to streamline and coordinate existing procedures for review and permitting of project impacts to biological resources.

The western Riverside County planning area is approximately 1.26 million acres or 1,966.7 square miles and includes all unincorporated County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet and San Jacinto ("**Plan Area**"). The area is known for its natural beauty and mild climate, which combine to make the region a popular destination for recreation, tourism, and new development. The region has sustained one of the highest rates of growth in the country.

The Plan proposes to set aside 500,000 acres of land for habitat and species, including 153,000 acres of currently private land, as per the MSHCP. Lands to be conserved will be assessed via a criteria-based approach resulting in a hardline reserve. Land will be set aside through a number of implementing methods, including the "Habitat Evaluation and Acquisition Negotiation Process", as described in Volume 1 of the MSHCP and Section 7.3 of the Implementing Agreement.

The MSHCP serves as a multiple species Habitat Conservation Plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act ("**ESA**") and as an NCCP under Section 2800-2835 of the Fish and Game Code. Upon approval of the MSHCP, the USFWS and CDFG can authorize the take of listed species and other species of concern, subject to the terms of the MSHCP.

The Plan is the largest NCCP/ HCP to date and covers diverse landscapes from urban cities to undeveloped foothills and montane forests. In addition to the presence of multiple habitats, the Plan stretches across the Santa Ana Mountains, Riverside Lowlands, San Jacinto Foothills, San

[8] All subsequent references to a "former" section number are to the indicated section of the Fish and Game Code as it read on December 31, 2001, in others words to the NCCPA as amended through 2000 and disregarding changes made in 2002 by S.B. 107.

Jacinto Mountains, Agua Tibia Mountains, Desert Transition and San Bernardino Mountains bioregions.

Western Riverside County can be characterized by rural and suburban development intermixed with agricultural operations and large blocks of undeveloped lands. Large blocks of land along the south, east and west boundaries of the planning area consist of national forest holdings. The natural topography is a valley lowland area intersected with rolling hills surrounded by mountain ranges. Lowland valley areas exist below 2,000 feet in elevation while scrub/chaparral dominated hillsides range from 2,000-3,000 feet in elevation. Mountainous areas within the planning area range from 3,000 to over 10,000 feet above mean sea level. Habitat communities within the Plan Area include: montane coniferous forest, woodlands and forest, coastal sage scrub, Riversidean alluvial fan sage scrub, desert scrub, chaparral, playas and vernal pools, grassland, riparian scrub/woodland/forest, meadow, meadows and marshes, cismontane alkali marsh, open water and developed/disturbed and agricultural land.

The County of Riverside ("**County"**) is lead agency for purposes of CEQA. Conservation, management, and implementation responsibilities and guarantees for the Plan will be set forth in an Implementing Agreement signed by the all Permittees and the Wildlife Agencies (United States Fish and Wildlife Service ("**USFWS"**) and CDFG). All Permittees and the Wildlife Agencies will implement their respective responsibilities under the MSHCP as described in the Implementing Agreement.

The MSHCP preserve will protect biodiversity, conserve sensitive species, enhance the quality of life in the Riverside County and Southern California regions, and enhance the region's attractiveness as a location for business. The MSHCP has been developed cooperatively by local jurisdictions, state and federal agencies, representatives of the development community, representatives of the environmental advocacy community, private citizens, landowners and special districts, with the goal of conserving native vegetation communities and associated species, rather than focusing preservation efforts on individual species. Historic loss of native vegetation has resulted in many species of wildlife becoming increasingly rare, and in some cases threatened with extirpation or extinction. In the absence of a multiple species habitat conservation plan, species might continue to be added to the federal and state threatened and endangered species lists. The MSHCP provides direct economic benefits by streamlining future development outside the preserve, establishing a permanently protected reserve through an assembly process within the MSHCP Criteria Area, and decreasing the costs of compliance with federal and state laws protecting biological resources.

The Western Riverside County MSHCP is one of three components of the Riverside County Integrated Project ("**RCIP**"). The remaining two components are an updated General Plan for all of Riverside County, and a Community and Environmental Transportation Acceptability Process ("**CETAP**") for Western Riverside County. Taken together, the components of the RCIP establish a vision and process for future growth and redevelopment in Riverside County that will provide for residential and commercial development, necessary infrastructure to serve that development, and implementation of an open space reserve that will provide for conservation and stewardship of Western Riverside County's rich biological heritage.

1.3 Implementing Agreement

CDFG plans to execute the Western Riverside County Multiple Species Habitat Conservation Plan Implementing Agreement ("**Implementing Agreement**" or "**IA**") concurrently with this NCCP Permit. The Implementing Agreement is an agreement between Western Riverside County Regional Conservation Authority, County of Riverside, Riverside County Flood Control and Water Conservation District, Riverside County Regional Parks and Open Space District, Riverside County Waste Management District, Riverside County Transportation Commission, the Cities of Banning, Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto and Temecula, California Department of Transportation, California Department of Parks and Recreation, USFWS, and CDFG. The IA is designed to ensure the implementation of the Plan, to bind each party to the terms of the Plan, and to provide remedies and recourse for failure to adhere to the terms of the Plan. This NCCP Permit specifically applies to the Plan as implemented pursuant to the Implementing Agreement.

2.0 ADMINISTRATIVE RECORD OF PROCEEDINGS

For purposes of these findings, the administrative record of proceedings for CDFG's discretionary issuance of this NCCP Permit consists, at a minimum, of the following documents:

- All Plan related materials prepared by the County of Riverside and submitted to CDFG;
- All staff reports and related non-privileged documents prepared by the CDFG with respect to its compliance with CEQA and with respect to the issuance of an NCCP Permit for the Plan;
- All written testimony or documents submitted by any person to CDFG relevant to these findings and CDFG's discretionary actions with respect to the Plan;
- All notices issued to comply with CEQA, the NCCPA, or with any other law relevant to and governing the processing and approval of this NCCP Permit by CDFG;
- All written comments received by CDFG in response to, or in connection with, environmental documents prepared for this project;
- All written evidence or correspondence submitted to, or transferred from, CDFG with respect to compliance with CEQA and with respect to the Plan;
- Any proposed decisions or findings related to the Plan submitted to CDFG by its staff, the County of Riverside, Plan supporters and opponents, or other persons;
- The documentation of the final decision by CDFG, including all documents cited or relied on in these findings adopted pursuant to CEQA and the NCCPA;

- Any other written materials relevant to CDFG's compliance with CEQA or CDFG's decision on the merits with respect to the NCCP Permit for the Plan, including any draft environmental documents that were released for public review, and copies of studies or other documents relied upon in any environmental document prepared for the project and either made available to the public during a public review period or included in CDFG's files on the Plan, and all non-privileged internal agency communications, including staff notes and memoranda related to the Plan or compliance with CEQA;

- Matters of common knowledge to CDFG, including but not limited to federal, state, and local laws and regulations; and

- Any other materials required to be in CDFG's administrative record of proceedings by Public Resources Code Section 21167.6, subdivision (e).

The custodian of the documents comprising the administrative record of proceedings is the California Department of Fish and Game, located at 1416 Ninth Street, Sacramento, California 95814. All related inquires should be directed to the Department's Office of the General Counsel at (916) 654-3821.

CDFG has relied on all of the documents listed in this section in exercising its independent judgment and reaching its decision with respect to the MSHCP, even if every document was not formally presented to CDFG or its staff as part of the CDFG files generated in connection with the Plan. Without exception, any documents set forth above not found in CDFG's files for the Plan fall into one of two categories. Certain documents reflect prior planning or legislative decisions of which CDFG was aware in approving the Plan. (See *City of Santa Cruz v. Local Agency Formation Comm.* (1978) 76 Cal.App.3d 381, 391-392; *Dominey v. Department of Personnel Administration* (1988) 205 Cal.App.3d 729, 738, fn. 6.) Other documents influenced the expert advice of CDFG staff, who then provided advice to the decision-makers at CDFG with respect to the NCCP Permit for the Plan. For that reason, such documents form part of the underlying factual basis for CDFG's decision related to the Plan. (See Pub. Resources Code, 21167.6, subd. (e)(10); *Browning-Ferris Industries v. City Council of City of San Jose* (1986) 181 Cal.App.3d 852, 866; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 153, 155.)

3.0 FINDINGS UNDER CEQA

3.1 Environmental Documents

CDFG has prepared these findings to comply with CEQA. CDFG is a "responsible agency" under CEQA with respect to the Plan because of its authority under the NCCPA. (See generally Pub. Resources Code, §§ 21002.1, subd. (d) and 21069; CEQA Guidelines, § 15381; see also Cal. Code Regs., tit. 14, § 783.3, subd. (a).) CDFG accordingly makes the findings that appear in Section 3.5, below, under CEQA as part of its discretionary decision to approve the Plan and authorize resulting take of species whose conservation and management is provided for in the Plan.

The County of Riverside is the CEQA "lead agency" for purposes of the Plan and has completed environmental review and approval of the Plan. (See generally Pub. Resources Code, § 21067; CEQA Guidelines, § 15367.) The County of Riverside analyzed the environmental effects of implementing the Plan.

The County of Riverside, as lead agency, has prepared a Multiple Species Habitat Conservation Plan that was approved and certified by the County Board of Supervisors on June 17, 2003. On May 21, 2004, the County prepared an Errata to that Plan. The Plan includes the following documents: Volumes I-V of the MSHCP, including Volume IV which is a Final Environmental Impact Report ("**EIR"**) and Environmental Impact Statement ("**EIS"**). The State Clearinghouse Number for the EIR is 2001101108. In analyzing and approving the Plan, the County of Riverside, as the lead agency, "consider[ed] the effects, both individual and collective, of all activities involved in [the] project." (Pub. Resources Code, § 21002.1, subd. (d).)

The purpose of the joint EIR/EIS is to evaluate the potential for environmental effects from the adoption and implementation of the MSHCP and the issuance of take permits for species pursuant to Section 10(a)(1)(B) of ESA. It also evaluates the potential for environmental effects of the issuance of take authorizations pursuant to Section 2800, et seq., of the NCCPA.

Subsequently CDFG prepared an Addendum to the Final EIR/EIS ("**Addendum**"). The purpose of the Addendum was to identify minor differences between the Western Riverside Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan approved by the County of Riverside in June 2003 and the subsequently released Biological Opinion prepared by the USFWS for the MSHCP/NCCP.

3.2 Findings Requirement

CEQA requires public agencies to adopt certain findings before approving a project for which an EIR was prepared. The findings that appear below are intended to comply with CEQA's mandate that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant effects thereof unless the agency makes one or more of the following findings:

(1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment;

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency; or

(3) Economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR.

Public Resources Code Section 21081, subdivision (a), CEQA Guidelines Section 15091, subdivision (a); see also CEQA Guidelines Section 15082, subdivision (b)(2). These findings are also intended to comply with the requirement that each finding by CDFG be supported by substantial evidence in the administrative record, as well as accompanied by a brief explanation of the rationale for each finding. (*Id.*, § 15091, subds. (a) and (b); see also Discussion following CEQA Guidelines, § 15091.) To that end, these findings provide the written, specific reasons supporting CDFG's decisions under CEQA as they relate to the approval of the Plan under the NCCPA.

Because CDFG adopts these findings as a responsible agency, the scope of these findings and CDFG's analysis under CEQA are more limited than that of the lead agency. (Pub. Resources Code, §§ 21102.1, subd. (d) and 21167.2; CEQA Guidelines, § 15096, subds. (f)-(h); Cal. Code Regs., tit. 14, §§ 783.3, subd. (a) and 783.5, subd. (c).) In its capacity as a responsible agency, CDFG is also bound by the legal presumption that the EIR certified by County of Riverside fully complies with CEQA. (CEQA Guidelines, § 15096, subd. (e)(1)-(2); *City of Redding*, *v. Shasta County Local Agency Formation Com (1989)*, 209 Cal.App.3d 1169, 1178-1181; see also Pub. Resources Code, § 21167.2; *Laurel Heights Improvement Association*, *v. Regents of the University of California (1993)*, 6 Cal.4th 1112, 1130.) In fact, CDFG is bound by the presumption of adequacy, except in extremely narrow circumstances. (Pub. Resources Code, § 21167.2; CEQA Guidelines, § 15096, subds. (e) and (f).) CDFG concludes such circumstances do not exist in the present case based on substantial evidence in its administrative record for the NCCP Permit.

3.3 Scope of Findings

CDFG is a responsible agency under CEQA for purposes of approving the Plan because of its authority under NCCPA and the lead agency's prior actions with respect to the project. As a responsible agency, CDFG's CEQA obligations are "more limited" than those of the lead agency. (CEQA Guidelines, § 15096, subd. (g)(1).) CDFG, in particular, is "responsible for considering only the effects of those activities involved in [the] project which it is required by law to carry out or approve." (Pub. Resources Code, § 21002.1, subd. (d).) Thus, while CDFG must "consider the environmental effects" of the Plan as disclosed in the environmental documents described above, CDFG "has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve." (CEQA Guidelines, § 15096, subds. (f), (g)(1).) Accordingly, because CDFG's exercise of discretion is limited to approval of the Plan and associated take authorizations, CDFG is responsible for considering only the environmental effects that fall within its authority under the NCCPA.

CDFG's more limited obligations as a responsible agency affect the scope of, but not the obligation to adopt, findings required by CEQA. Findings are required, in fact, by each "public agency" that approves a "project for which an environmental impact report has been certified which identifies one or more significant effects on the environment [.]" (Pub. Resources Code, § 21081, subd. (a); CEQA Guidelines, § 15091, subd. (a); see also Pub. Resources Code, § 21068

("significant effect on the environment defined"); CEQA Guidelines, § 15382 (same).) Because the County of Riverside certified the EIR in approving the Plan, the obligation to adopt findings under CEQA necessarily applies to CDFG as a responsible agency. (CEQA Guidelines, § 15096, subd. (h); *Resource Defense Fund v. Local Agency Formation Comm. of Santa Cruz County* (1987) 191 Cal.App.3d 886, 896-898.)

The specific provision of the CEQA Guidelines addressing the responsible agency findings obligation is Section 15096, subdivision (h). That section provides, in pertinent part, that a "responsible agency shall make the findings required by Section 15091 for each significant effect of the project and shall make the findings in Section 15093 if necessary." (CEQA Guidelines, § 15096, subd. (h).) The scope of this charge in the guidelines is governed by statutory language concerning the extent of responsible agency decision making authority under CEQA. As noted above, the controlling statute provides that a "responsible agency shall be responsible for considering only the effects of those activities involved in a project which it is required by law to carry out or approve." (Pub. Resources Code, § 21002.1, subd. (d).) The same section underscores that the more limited scope of review for responsible agencies necessarily "applies only to decisions by a public agency to carry out or approve a project[.]" (*Ibid.*) For the same reason, CDFG is required to adopt findings under CEQA in the present case only for those environmental effects specifically authorized by CDFG under NCCPA.

3.4 Legal Effect of the Findings

These findings are not merely informational. To the extent CDFG relies on implementation of particular measures to make a necessary finding under CESA or NCCPA, those measures constitute a binding set of obligations that take effect when CDFG approves the NCCP Permit for the Plan. CDFG believes that all mitigation and conservation measures that it has relied on for purposes of its findings are separately required under the Plan or the Implementing Agreement, or are express conditions of this NCCP Permit. Consequently CDFG does not anticipate that as a practical matter these findings, in and of themselves, will increase obligations of those operating under authority of this NCCP Permit.

3.5 Findings Regarding Potentially Significant Environmental Effects

The County's Final EIR/EIS analyzed the following impacts: biological resources, agricultural and extractive resources, population, housing and employment, public services, transportation and circulation, and the cumulative impacts associated with the overall plan. Issues deemed to be not as significant and therefore not selected for detailed analysis included: aesthetics, air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, public services, utilities and environmental justice (Sections 3.0, 4.0 and 5.0 of Volume IV of V: Final EIR/EIS).

The Final EIR/EIS identified several potentially significant environmental impacts that would result with implementation of the MSHCP. The County concluded as the lead agency for the project under CEQA that some of these significant effects could be avoided through the adoption of feasible mitigation measures and that other potentially significant impacts could not be

avoided by the adoption of feasible mitigation measures or feasible environmentally superior alternatives. The County found in the EIR/EIS that there would be no significant non-mitigable impacts from implementation of the MSHCP in the areas of: agricultural resources, public services, and transportation and circulation. The County found that implementation of the Plan would have a significant effect on the population, housing and employment and extractive resources (cumulative only). Regarding biological resources, the County found that the Plan would reduce identified impacts to a level below significance for all impacts except those associated with non-covered species, native grasslands, and edge effects (cumulative). The County concluded that impacts to non-covered species, native grasslands, and edge effects (cumulative) are significant and not mitigable therefore a statement of overriding findings was prepared and adopted.

The EIR/EIS does not reiterate the information found in the MSHCP but does incorporate by reference the avoidance and mitigation measures included with the MSHCP. The list of assumptions on page 4.1-9 of the EIR/EIS details the policies in the MSHCP that are designed to avoid or reduce biological impacts and which will be incorporated during Plan implementation. These include: Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP, Section 6.1.2); Protection of Narrow Endemic Plant Species (MSHCP, Section 6.1.3); Additional Survey Needs and Procedures (MSHCP, Section 6.3.2) and Guidelines Pertaining to Urban/Wildlands Interface (MSHCP, Section 6.1.4). The analysis of alternatives in the EIR/EIS also incorporates the following components of the MSHCP: Management and Monitoring (MSHCP Section 5.0); Criteria-based Plan (MSHCP Section 3.3.1-3.3.17); and description and analysis of Covered Activities/Allowable Uses (MSHCP Section 7.0).

Management measures occur at the landscape level and the species-specific level. These management measures address the processes, threats and disturbances that affect habitat and species. Management measures will be periodically evaluated to ensure their effectiveness. The disturbance regimes include trespass, dumping, vandalism, off-road vehicle use, the fire regime, habitat disturbance, invasive plants and animals, erosion and sedimentation. These measures will benefit all species and habitats and are found on page 5-5 of the MSHCP. Management responses to disturbance regimes are found on page 5-9 of the MSHCP. The range of measures regarding habitat include natural regeneration, maintenance of existing or restored habitat, enhancement, revegetation, restoration and creation (page 5-12 of the MSHCP).

Volume II, Section B of the MSHCP includes the detailed species accounts for all of the Covered Species. Page IIB-2 of Volume II, Section B of the species accounts discusses implementation objectives, including: 1) upland habitat quality within the MSHCP Conservation Area will be maintained and managed in similar or better condition as when the lands are conveyed; 2) wetland habitat quality within the MSHCP Conservation Area will be maintained and managed in similar or better condition as when the lands are conveyed; 3) best management practices will be implemented in accordance with the guidelines presented in Appendix C to the MSHCP, Volume I and 1601 Streambed Alteration Agreements for flood control facilities maintenance will be implemented; new lands adjacent to the MSHCP Conservation Area shall implement the Guidelines Pertaining to the Urban/Wildlands Interface from Section 6.1.4 of the MSHCP; and the maintenance of existing habitat conditions prior to reserve assembly policies in Section 6.1.5

of the MSHCP. Additionally, Page IIB-2 of Volume II Section B of the MSHCP discusses measures in 6.1.2 of the MSHCP, Volume I, which shall be implemented to protect Riparian/Riverine Areas and Vernal Pool species as listed on page IIB-3 and 4. The Narrow Endemic Plant Species policies in Section 6.1.3 of the MSHCP, Volume I shall be implemented for the benefit of the species listed on page IIB-4 of Volume II, Section B of the MSHCP. The Additional Survey Needs and Procedures in Section 6.3.2 of the MSHCP, Volume I shall also be implemented to benefit the species listed on pages IIB-4 and 5 of Volume II, Section B of the MSHCP. The MSHCP also includes implementation measures regarding Covered Activities within the Criteria Area and Allowable Uses within the MSHCP as per Section 7.0 of the MSHCP, Volume 1. Monitoring and management activities will be undertaken for each of the MSHCP Covered Species and monitoring and management activities are described in Sections 5.2 and 5.3 of the MSHCP, Volume I.

Species specific biological goals have been established for all of the Covered Species in the MSHCP. These objectives are contained in the specific species accounts in Volume II, Part II, Section B of the MSHCP. All of the Covered Species have been assigned to one of three group designations (Group 1, Group 2, or Group 3), based on group definitions in the NCCPA. These groupings have been assigned to assist development of individual species objectives as well as monitoring and management requirements. The specific group definitions are found in Volume II, Part 2 of 2, Section B, page IIB-5-6, of the MSHCP. Each species account contains a group designation and rationale, species conservation objectives, an analysis of conservation levels, an analysis of MSHCP Conservation Area configuration issues, a conservation strategy summary and a take analysis. Included with the species analysis is also the specific species account information which includes: species data characterization, habitat and habitat associations, biogeography, known populations within Riverside County, key populations within the Plan Area, biology of the species, threats to the species, and the literature cited.

Against this backdrop, this section presents CDFG's responsible agency findings with respect to the potentially significant environmental effects authorized by CDFG pursuant to the NCCP Permit issued to the Permittees under NCCPA. The NCCP Permit includes the 146 listed and non-listed species referred to collectively as "Covered Species" in the MSHCP and the EIR/EIS. The take of Covered Species Adequately Conserved is allowed upon permit issuance. Covered Species Meeting Conservation can be taken once certain objective criteria are met. The list of 146 Covered Species is found in Exhibit C of the Implementing Agreement. The list of Covered Species Adequately Conserved is found in Exhibit D of the IA.

Based on the EIR/EIS and Addendum, CDFG finds that the NCCP Approval may result in significant adverse effects on the environment. CDFG further finds that changes or alterations have been required in, or incorporated into, the project by CDFG and the Permittees that avoid or mitigate the significant environmental effects, as set forth in the EIR/EIS, the Addendum to the EIR/EIS, and the IA.

This NCCP Permit authorizes the take of the Covered Species Adequately Conserved, and once the stated objective criteria are met, the Covered Species Meeting Conservation. The Department as a consequence, hereby makes the following findings under CEQA with respect to

effects associated with the take of each species by the MSHCP project as authorized under the NCCPA.

Impact 3.5.1 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 1 coastal sage scrub/chaparral/desert scrub species: Belding's orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), coastal western whiptail (*Cnemidophorus tigris multiscutatus*), granite spiny lizard (*Sceloporus orcutti*), San Diego horned lizard (*Phrynosoma coronatum blainvillei*), brush rabbit (*Sylvilagus bachmani*), coyote (*Canis latrans*), Dulzura kangaroo rat (*Dipodomys simulans*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), San Diego desert woodrat (*Neotoma lepida intermedia*), and Coulter's matilija poppy (*Romneya coulteri*).

Finding 3.5.1 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 1 coastal sage scrub/chaparral/desert scrub species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.1:

Under the Plan, Group 1 species are species whose coverage is warranted based upon regional or landscape level considerations, such as healthy population levels, widespread distribution throughout the Plan Area, and life history characteristics that respond to habitat-scale conservation and management actions. The individual species objectives in combination with the "Assumptions" (Section 4.1.2 of the Final EIR/EIS and Addendum), the habitat protection measures in Section 6.0 of the MSHCP, and the management, monitoring and adaptive management plan (Section 5.0 of the MSHCP) will ensure the Conservation of species and habitat. Conservation of large Core Areas will also ensure Conservation by providing large areas of habitat connected by Linkages. Preservation of populations of species in different geographic areas will ensure that a catastrophic event in one or multiple areas will not threaten the survival of a particular species.

These species are widespread throughout the Plan Area and occur in coastal sage scrub, chaparral, and desert scrub habitats. Implementation of the Plan will result in the loss of coastal sage scrub, chaparral and desert scrub habitat. Specific habitat loss figures vary with the species. Habitat losses are as follows: for Belding's orange-throated whiptail 155,483 acres; for coastal western whiptail 182,962 acres; for granite spiny lizard 237,637 acres; for San Diego horned lizard 322,536 acres; for brush rabbit 223,195 acres; for coyote 495,000 acres; for Dulzura kangaroo rat 146,632 acres; for northwestern San Diego pocket mouse 323,457 acres; for San Diego black-tailed jackrabbit 183,412 acres; for San Diego desert woodrat 218,955 acres; and,

for Coulter's matilija poppy 26,730 acres (pages R-5, R-19, R-40, R-76, M-37, M-48, M-64, M-124, M-175, M-189 and P-84 of Volume II: Section B Species Accounts and pages 4.1-35, 4.1-38, 4.1-37, 4.1-65, 4.1-60, 4.1-61, 4.1-60, 4.1-63, 4.1-64, and 4.1-83 of Volume IV: EIR/EIS and Addendum).

With the exception of Coulter's matilija poppy and San Diego desert woodrat, the Plan has two biological objectives for each of these species which will ensure that impacts are mitigated to below a level of significance. In the Plan, the objectives for Belding's orange-throated whiptail are to include within the Conservation Area 226,313 acres of suitable habitat and at least nine (9) Core Areas (page R-2, Volume II: Section B Species Accounts). In the Plan, the objectives for coastal western whiptail are to include within the Conservation Area 142,117 acres of suitable habitat and at least 13 Core Areas (page R-16, Volume II: Section B Species Accounts). In the Plan, the objectives for granite spiny lizard are to include within the Conservation Area 408,216 acres of suitable habitat and at least 12 Core Areas (page R-37, Volume II: Section B Species Accounts). In the Plan, the objectives for San Diego horned lizard are to include within the Conservation Area 407,036 acres of suitable habitat and at least 13 Core Areas (page R-73, Volume II: Section B Species Accounts). In the Plan, the objectives for brush rabbit are to include within the Conservation Area 382,115 acres of suitable habitat and 44,000 acres of dispersal and/or movement Linkages (page M-34, Volume II: Section B Species Accounts). In the Plan, the objectives for coyote are to include within the Conservation Area 489,500 acres of suitable habitat and key Linkages as specified on page M-46, Volume II: Section B Species Accounts. In the Plan, the objectives for the Dulzura kangaroo rat are to include within the Conservation Area 198,200 acres of suitable habitat and 21,000 acres of dispersal and/or movement Linkages (page M-60, Volume II: Section B Species Accounts). In the Plan, the objectives for the northwestern San Diego pocket mouse are to include within the Conservation Area 407,645 acres of suitable habitat and 18,000 acres of dispersal and/or movement Linkages (page M-121, Volume II: Section B Species Accounts). In the Plan, the objectives for the black-tailed jackrabbit are to include within the Conservation Area 142,116 acres of suitable habitat and 27,000 acres of habitat Linkages (page M-172, Volume II: Section B Species Accounts). In the Plan, the objective for the San Diego desert woodrat is to include within the Conservation Area 364,828 acres of suitable habitat (page M-186, Volume II: Section B Species Accounts). In the Plan, the objectives for Coulter's matilija poppy are to include within the Conservation Area 65,350 acres of suitable habitat and confirm 30 localities of this species (P-82, Volume II: Section B Species Accounts). In addition, Coulter's matilija poppy may benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for coastal western whiptail and Coulter's matilija poppy. These differences are primarily related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat, and particularly the Riverside Lowlands bioregion which includes most of the existing urban development in the Plan Area but also includes large remaining habitat areas. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP

or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 1 Coastal Sage Scrub, chaparral and desert scrub species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.2 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 1 High Elevation species: black swift (*Cypseloides niger*), Lincoln's sparrow (*Melospiza lincolnii*), MacGillivray's warbler (*Oporomis tolmiei*) and mountain quail (*Oreortyx pictus*).

Finding 3.5.2 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 1 High Elevation species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.2:

These species are found primarily in United States Forest Service lands, including the Cleveland National Forest and San Bernardino National Forest which total 202,700 acres of Conservation.

Black swift is spread widely over the Plan Area in low numbers. Habitat for this species includes: montane coniferous woodland and forest habitats of the San Jacinto Mountains and San Bernardino Bioregions that contain waterfalls and cliffs for nesting. The population is primarily migrant with the exception of known nesting locations in the San Jacinto Mountains. Implementation of the Plan will result in the loss of approximately 12,270 acres of potential habitat for this species (page B-57, Volume II: Section B Species Accounts, Table 4C page 4.1-47 EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance: include within the Conservation Area 34,020 acres of suitable breeding and foraging habitat for this species (page B-55, Volume II: Section B Species Accounts). This species is a Forest Service Sensitive Species which requires a

biological evaluation to assess the potential impacts of Forest Service activities on it (page B-54). In addition, this species may benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

Lincoln's sparrow has sparse and widespread distribution throughout the Plan Area within a variety of habitats. It is a transient in the spring and fall and may winter in the area. Black swift is known to utilize montane meadow, wet montane meadow and the edges of montane riparian and riparian scrub for breeding purposes. Many of these areas are located in the San Jacinto wilderness. Wintering and migratory areas include a wide variety of lowland scrub and scrub habitats. Implementation of the Plan will result in the loss of approximately 580 acres of potential habitat for this species (page B-281, Volume II Species Accounts, Table 4C page 4.1-51 EIR/EIS and Addendum). In the Plan there are three (3) biological objectives which will ensure that impacts on this species are mitigated to below a level of significance. They are: 1) include within the Conservation Area at least 470 acres of suitable breeding habitat; 2) include within the Conservation Area 190,390 acres of suitable wintering habitat; and 3) maintain occupancy within three large Core Areas (100%) in at least one (1) year out of any five (5) consecutive-year period (page B-277, Volume II: Section B Species Account). Lincoln's sparrow is on the Covered Species Meeting Conservation list (see Objective 3, page B-277, Volume II: Section B Species Accounts). In addition, this species may benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for Lincoln's sparrow. These differences are primarily related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat, and particularly the Riverside Lowlands bioregion which includes most of the existing urban development in the Plan Area but also includes large remaining habitat areas. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

MacGillivray's warbler has sparse and widespread distribution throughout the Plan Area within a variety of habitats, montane coniferous forest and woodland, riparian scrub, woodland and forest habitat, oak woodland and forest, chaparral, coastal sage scrub, desert scrub and Riversidean sage scrub. Most of MacGillivray's warbler habitat is located within the San Jacinto Wilderness Area on Forest Service land. It is a transient in the spring and fall and does not winter in the Plan Area. Implementation of the Plan will result in the loss of approximately 240,570 acres of potential habitat for this species (page B-311, Volume II: Section B Species Accounts and page 4.1-53, Volume IV: EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance: the inclusion of 418,780 acres of suitable habitat for this species (page B-309, Volume II: Section B Species Accounts). In addition, this species may benefit from the Riparian/Riverine Areas and

Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

Mountain quail has a widespread distribution within all of the mountain ranges west of the deserts in chaparral, oak deciduous woodland and forest, and coniferous forest within the Desert Transition, San Bernardino Mountains, San Jacinto Mountains and Santa Ana Mountain Bioregions. The Plan states that mountain quail predictably uses suitable brushy montane chaparral and occurs widely throughout the Plan Area and therefore should respond well to a landscape level of management. Implementation of the Plan will result in the loss of 93,800 acres of potential habitat outside the Criteria Area and 32,730 acres of potential habitat in Rural/mountainous designation (page B-346, Volume II: Section B Species Accounts and page 4.1-54, Volume IV: EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance: include within the Conservation Area at least 234,940 acres of suitable habitat in the desert transition, San Bernardino Mountains, San Jacinto Mountains and Santa Ana Mountains as well as Linkages between the mountainous areas and lowlands (page B-342, Volume II: Section B Species Accounts).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 1 High Elevation species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.3 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 1 Wetland/Marsh/Lake species: bald eagle (*Haliaeetus leucocephalus*) and Peregrine falcon (*Falco peregrinus*), both of which are state listed fully protected species.

Finding 3.5.3 The Department finds that changes or alterations have been required in or incorporated into the MSHCP which mitigate or avoid the potential significant impacts of the MSHCP on these Group 1 Wetland/Marsh/Lake species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.3:

Bald Eagle and Peregrine falcon, both state fully protected species, have a wide distribution throughout the Plan Area. Bald eagle occurs within the Plan Area predominantly as a winter visitor and Peregrine falcon as a fall visitor at every open water body. Peregrine falcon frequents Prado Basin on a regular basis. Implementation of the Plan will result in the loss of 2,140 acres of suitable habitat for these species (page B-14, Volume II: Section B Species Accounts). In the Plan there are two biological objectives which will ensure that impacts on these species are mitigated to below a level of significance: 1) include within the Conservation Area at least 10,340 acres of open water habitat (specified on page B-12, Volume II: Section B Species Accounts) and 5,520 acres of riparian habitat within the Prado Basin and Santa Ana River; and, 2) establish a 100-meter buffer around open water bodies specified in Objective 1. These species will benefit from the Riparian/Riverine Areas and Vernal Pool Policy (Sections 6.1.2, 9.2(2)(7) of the MSHCP and 4.1-85 of the EIR/EIS), Best Management Practices (Section 9.2(2)(4) of the MSHCP) and nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 1 Wetland/Marsh/Lake species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Take of these state listed fully protected species is not authorized by the NCCP Permit and is prohibited by the CDFG Code except in certain limited situations (see Fish and Game Code Sections 3511, 4700, 5050, and 5515).

Impact 3.5.4 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 1 Riparian/Aquatic species: merlin, (*Falco columbarius)*; sharp-shinned hawk, (*Accipiter striatus)*; and Wilson's warbler, (*Wilsonia pusilla)*.

Finding 3.5.4 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 1 Riparian/Aquatic species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.4:

The merlin has a sparse and widespread distribution through the Plan Area within almost every habitat category. It is an opportunistic predator which occurs as a transient in the spring and fall and occasionally winters in the area, but does not nest in the region. Implementation of the Plan will result in the loss of 302,430 acres of potential habitat for the merlin (page B-322, Volume II: Section B Species Accounts and page 4.1-49, Volume IV: EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance: to conserve at least 193,840 acres of agriculture (field crops), grassland, freshwater marsh, cismontane alkali marsh, playa and vernal pool, desert scrubs, Riversidean alluvial fan sage scrub, coastal sage scrub, and riparian scrub, woodland and forest and oak woodlands and forest habitats (page B-319). This species will benefit from the Riparian/Riverine Areas and Vernal Pool Policy (Sections 6.1.2, 9.2(2)(7) of the MSHCP and 4.1-85 of the EIR/EIS) and Best Management Practices (Section 9.2(2)(4) of the MSHCP).

The sharp-shinned hawk has a widespread distribution throughout the Plan Area within suitable foraging habitat. It is an opportunistic predator which occurs within the Plan Area as a transient in the spring and fall and may winter within the area. Implementation of the Plan will result in the loss of approximately 240,570 acres of potential habitat for this species (page B-449, Volume II: Section B Species Accounts and page 4.1-39, Volume IV: EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance: conserve at least 20,500 acres of montane coniferous forest for breeding areas and 398,280 acres of riparian scrub, woodland and forest, oak woodland and forest, chaparral, coastal sage scrub, desert scrub, and Riversidean alluvial fan sage scrub for foraging (page B-447). This species will benefit from the Riparian/Riverine Areas and Vernal Pool Policy (Sections 6.1.2, 9.2(2)(7) and 4.1-85 of the EIR/EIS), Best Management Practices (Section 9.2(2)(4) of the MSHCP) and nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

Wilson's warbler has a sparse and widespread distribution in almost every habitat in the Plan area. It is a transient in the spring and fall and breeds within the mountain Bioregions in shrub and scrub habitat, wet and montane meadow, and edges of riparian and forested habitats. Implementation of the Plan will result in the loss of approximately 71,030 acres of potential breeding habitat and 219,680 acres of potential migratory movement habitat (page 616, Volume II: Section B Species Accounts and page 4.1-59, Volume IV: EIR/EIS). In the Plan there are two biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 198,850 acres of suitable montane meadow, riparian scrub, oak woodland and forest, coastal sage scrub, chaparral and Riversidean sage scrub in the San Bernardino Mountains, San Jacinto Mountains and San Ana Mountain Bioregions; and 2) include within the Conservation Area at least 192,140 acres of suitable dispersal and migration habitat and interconnecting Linkages for transient migration movement, including most of the lowland habitats (page B-612, Volume II: Section B Species Accounts). This species will benefit from the Riparian/Riverine Areas and Vernal Pool Policy

(Sections 6.1.2, 9.2(2)(7) of the MSHCP and 4.1-85 of the EIR/EIS) and Best Management Practices (Section 9.2(2)(4) of the MSHCP).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 1 Riparian/Aquatic species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.5 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 1 Grassland species: ferruginous hawk *(Buteo regalis)*, prairie falcon *(Falco mexicanus*), Swainson's hawk *(Buteo swainsoni)* and Payson's jewelflower (*Caulanthus simulans*).

Finding 3.5.5 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 1 Grassland species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.5

The ferruginous hawk, Swainson's hawk and prairie falcon have a widespread distribution throughout the Plan Area. Neither the ferruginous hawk nor Swainson's hawk nest in the Plan Area. Habitats used by these species include grassland, playa and vernal pool, Riversidean alluvial fan sage scrub, coastal sage scrub, and desert scrub. Core Areas for these species include: Prado Basin, Santa Ana River, and Mystic Lake/San Jacinto Wildlife Area. Swainson's hawk has a wider distribution with other areas including Lake Mathews-Estelle Mountain, Lake Elsinore, Temecula Creek, Vail Lake/Wilson Valley, Lake Skinner, Sycamore Canyon Regional Park, Box Springs Mountain Motte-Rimrock Reserve and the Badlands. Implementation of the Plan will result in the loss of approximately 257,290 acres of potential habitat for the ferruginous hawk; 257,220 acres of potential habitat for Swainson's hawk; and 182,490 acres or of potential habitat for prairie falcon (pages B-200, B-424 and B-498 of Volume II: Section B Species Accounts, and pages 4.1-45 and 4.1-150 of Volume IV: EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on these respective species are mitigated to below a level of significance: 1) for ferruginous hawk include in the Conservation Area at least

144,120 acres varied habitat (see above), 2,690 acres at Mystic Lake/San Jacinto Wildlife Area and 5,520 acres of riparian habitat at Prado Basin/Santa Ana River; for Swainson's hawk include in the Conservation Area at least 141,960 acres of varied habitats (see above); and for prairie falcon include in the Conservation Area at least 141,510 acres of varied habitat (see above). These species will benefit from the Riparian/Riverine Areas and Vernal Pool Policy (Sections 6.1.2, 9.2(2)(7) of the MSHCP and 4.1-85 of the EIR/EIS), Best Management Practices (Section 9.2(2)(4) of the MSHCP), Urban/Wildlands Interface Policy (Section 6.1.4 of the MSHCP) and nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

Payson's jewelflower has a widespread distribution in the southeastern portion of the Plan Area in peninsular juniper woodland and scrub, chaparral and coastal sage scrub in disturbed areas. Known locations include Aguanga, Billy Goat Mountain, Lewis Valley, and Tule Valley. Implementation of the Plan will result in the loss of approximately 46,380 acres of potential habitat (page P-284, Volume II: Section B Species Accounts and page 4.1-69 of Volume IV: EIR/EIS). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance. The objective for this species is to conserve 94,430 acres of suitable habitat (page P-282, Volume II: Section B Species Accounts).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 1 Grassland species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.6 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 2 Coastal Sage Scrub/Alluvial Fan Sage Scrub and Desert Scrub species: granite night lizard (*Xantusia henshawi henshawi)*; northern red diamond rattlesnake (*Crotalus ruber ruber);* San Diego banded gecko (*Coleonyx variegates abbottii)*; Southern sagebrush lizard (*Sceloporous graciosus vandenburgianus)*; Bell's sage sparrow (*Amphispiza belli belli)*; coastal California gnatcatcher (*Polioptila californica californica)*; southern California rufous-crowned sparrow (*Aimophila ruficeps canescans);* long-tailed weasel (*Mustela frenata)*; mountain lion (*Puma concolor)*; and Palmer's grapplinghook (*Harpagonella palmeri)*

Finding 3.5.6 The Department finds that changes or alterations have been required in or incorporated into the MSHCP which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 Coastal Sage Scrub/Alluvial Fan Sage Scrub and Desert Scrub species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.6:

Group 2 species are those where coverage is warranted based on regional or landscape level considerations with site specific conservation and management requirements that are clearly identified in the Plan for species that are generally well-distributed, but that have Core habitats that must be conserved. In the Plan (Volume II of V: The Reference Document, Part 2 of 2: Section B) these species are characterized by the fact that they are widespread, are located in many of the Core Areas, and do not require specific management measures. The common requirements for conservation of these species are large habitat areas, adequate vegetative cover, and suitable dispersal and/or movement Linkages, all of which are provided in the Plan.

Granite night lizard occurs in localized populations in flaking granite, rock outcrops and boulder fields, commonly associated with chaparral, sage scrub, mixed conifer forest and oak woodland. Implementation of the Plan will result in the loss of approximately 197,038 acres of potential habitat for this species (page R-29, Volume II: Section B Species Accounts and 4.1-38 of Volume IV: EIR/EIS). In the Plan there are two biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include at least 297,143 acres of chaparral, sage scrub, coniferous forest and oak woodland east of Interstate 215 and containing the species' microhabitat requirements; and, 2) include within the Conservation Area at least nine (9) Core Areas (pages R-26 & 27, Volume II: Section B Species Accounts).

Northern red diamond rattlesnake is widely distributed throughout the Plan Area with no defined Core Areas. It is associated with undisturbed old growth chaparral and coastal sage scrub. Implementation of the Plan will result in the loss of approximately 214,769 acres of potential habitat for this species (page R-51, Volume II: Section B Species Accounts and page 4.1-36, Volume IV: EIR/EIS). The Plan states that this species will respond to a landscape level of management with site-specific requirements. In the Plan there are three biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 338,672 acres of chaparral and sage scrub habitat below 1,520 meters; 2) include within the Conservation Area at least 10 Core Areas (see page R-48, Volume II: Section B Species Accounts); and, 3) include Linkages between Core Areas.

San Diego banded gecko is widely distributed throughout the Riverside lowlands and San Jacinto Foothills Bioregions in a wide variety of sage scrub and chaparral habitats. There are no definable Core Areas for this species. Implementation of the Plan will result in the loss of approximately 125,771 acres of potential habitat for this species (page R-64, Volume II: Section B Species Accounts and page 4.1-36, Volume IV: EIR/EIS). In the Plan there are three biological objectives which will ensure that impacts on this species are mitigated to below a

level of significance: 1) include within the Conservation Area at least 147,066 acres of coastal sage scrub and chaparral below 1,520 meters; 2) include within the Conservation Area at least seven (7) Core Areas (see page R-61, Volume II: Section B Species Accounts); 3) include in the Conservation Area suitable microhabitat.

Southern sagebrush lizard is found primarily in open montane areas in the San Jacinto and Santa Rosa Mountains above 5,000 feet. The Plan states that this species will respond to a landscape level of management with site specific requirements (fallen debris and rock piles) and management measures. Implementation of the Plan will result in the loss of approximately 10,246 acres of potential habitat for this species (page R-120 of Volume II: Section B Species Accounts and page 4.1-37 of Volume IV: EIR/EIS). In the Plan there are two biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 41,105 acres of chaparral, coastal sage scrub, desert sage scrub, montane coniferous forest, peninsular juniper woodland and woodlands and forest above 1,500 meters, and, 2) include with the Conservation Area suitable microhabitat (page R-117, Volume II: Section B Species Accounts).

Bell's sage sparrow, southern California rufous-crowned sparrow and coastal California gnatcatcher are all widely distributed throughout the Plan Area in coastal sage scrub, desert scrub and chaparral in the Riverside Lowland and San Jacinto Foothills Bioregions. Implementation of the Plan will result in the loss of approximately 177,440 acres of potential habitat for Bell's sage sparrow; 63,700 acres of potential habitat for the coastal California gnatcatcher; and 70,980 acres of potential primary habitat for the Southern California rufous-crowned sparrow (pages B-26, B-132 and B-463 of Volume II: Section B Species Accounts and pages 4.1-42 and 4.1-41 of Volume IV: EIR/EIS). The Plan (page B-26) states that the distribution and habitat use of Bell's sage sparrow is very similar to that of the coastal California gnatcatcher and Southern California rufous-crowned sparrow. However, each of these species has different biological objectives. In the Plan there are three biological objectives for Bell's sage sparrow which will ensure that impacts on this species are mitigated to below a level of significance. The objectives for Bell's sage sparrow are: 1) include within the Conservation Area 245,750 acres of suitable habitat; 2) include within the Conservation Area at least 12 or 14 Core Areas; and, 3) include specified habitat Linkages (page B-26, Volume II: Section B Species Accounts). In the Plan there are three biological objectives which will ensure that impacts on the coastal California gnatcatcher are mitigated to below a level of significance. The three objectives for the coastal California gnatcatcher are: 1) include within the Conservation Area at least 77,070 acres of suitable habitat; 2) include within the Conservation Area at least 13 of the specified Core Areas and Linkages; and, 3) maintain (once every three years) continued use of and successful reproduction at 75% of the Core Areas (page B-145, Volume II: Section B Species Accounts). In the Plan there are three biological objectives which will ensure that impacts on Southern California rufous-crowned sparrow are mitigated to below a level of significance. For Southern California rufous-crowned sparrow the objectives are: 1) include within the Conservation Area at least 82,640 acres of suitable primary habitat; 2) include within the Conservation Area at least nine (9) Core Areas and Linkages; and, 3) include within the Conservation Area at least 174,620 acres of suitable secondary habitat (page B-459, Volume II: Section B Species Accounts).

Long-tailed weasel occurs throughout the Plan Area in all types of habitat, including agricultural and disturbed areas primarily in Moreno Valley, Beaumont, Riverside, Pedley, Cherry Valley, Norco and Temecula. Implementation of the Plan will result in the loss of approximately 490,675 acres of potential habitat for this species (page M-79, Volume II: Section B Species Accounts and page 4.1-64 of Volume IV: EIR/EIS). In the Plan there are three biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 474,500 acres of suitable habitat; 2) include 52,400 acres of dispersal and/or movement Linkages between Core Areas; and, 3) maintain the continued use by long-tailed weasel at a minimum of 75 percent of the localities where the species is known to occur (pages M-75 & 76, Volume II: Section B Species Accounts).

Mountain lion occurs in a variety of habitats from the Santa Ana Mountains, San Bernardino Mountains, San Jacinto Mountains, Santa Rosa Mountains and brush foothills and riparian areas that serve as connections. Implementation of the Plan will result in the loss of 132,000 acres of suitable habitat (page M-110, Volume II: Section B Species Accounts and page 4.1-62 of Volume IV: EIR/EIS). In the Plan there are three biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include in the Conservation Area 319,843 acres of suitable habitat; 2) include within the Conservation Area Linkages indicated on page M-105, Volume II: Section B Species Accounts); and, 3) maintain or improve functionality of dispersal routes in key areas as specified on page M-105.

Take of this specially protected species is not authorized by the NCCP Permit and is prohibited by CDFG Code Section 4800.

Palmer's grapplinghook is known from several Core Areas but restricted to particular soil series in chaparral, coastal sage scrub and grassland in the Riverside Lowlands, Santa Ana Mountains and San Jacinto Foothills Bioregions. Implementation of the Plan will result in the loss of approximately 131,300 acres of habitat for this plant (page P-249, Volume II: Section B Species Accounts and page 4.1-74, Volume IV: EIR/EIS). Of the 84 occurrences, 28 may not be conserved. In the Plan there are two biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 90,490 acres of suitable habitat; and, 2) include within the Conservation Area at least 24 of the known occurrences of this species. The Plan states that conservation of this species will be achieved by inclusion of at least 90,490 acres of suitable habitat and 58 occurrences at 13 localities in Core Areas. Although not a narrow endemic species, Palmer's grapplinghook will also benefit from the narrow endemic policies of the Plan (6.1.3 of the Plan and 9.2(2)(8) of Volume IV: EIR/EIS) because of its association with some narrow endemic plants.

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 Coastal Sage Scrub/Alluvial Fan Sage Scrub/Chaparral and Desert Scrub species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of

significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.7

Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these 28 Group 2 High Elevation species: San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*); San Diego mountain kingsnake (*Lampropeltis zonata pulchra*), southern rubber boa (*Charina bottae umbratica)*; California spotted owl (*Strix occidentalis occidentalis)*; Nashville warbler (*Vermivora ruficapilla)*; Northern goshawk (*Accipiter gentiles)*; Williamson's sapsucker (*Sphyrapicus thyroideus)*; beautiful hulsea (*Hulsea vestita* ssp. *callicarpha)*; California beardtongue (*Penstemon californicus)*; California bedstraw (*Galium californicus* ssp. *primum)*; chickweed oxytheca (*Oxytheca caryophylloides)*; Cleveland's monkeyflower (*Mimulus clevelandii)*; Cliff cinquefoil (*Potentilla rimicola)*; Engelmann oak (*Quercus engelmannii)*; Graceful tarplant (*Holocarpha virgata* ssp. *elongate)*; Hall's monardella (*Monardella macrantha* ssp. *Hallii)*; heart-leaved pitcher sage (*Lepechinia cardiophylla)*; intermediate mariposa lily (*Calochortus weedii* var. *intermedius)*; Jaeger's milk vetch (*Astragalus pachypus* var. *jaegeri)*; lemon lily (*Lilium parryi)*; Mojave tarplant (*Deinandra mohavensis)*; ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum)*; Palomar monkeyflower (*Mimulus diffuses)*; Plummer's mariposa lily (*Calochortus plummerae)*; prostrate spineflower (*Chorizanthe procumbens)*; shaggy-haired alumroot (*Heuchera hirsutissima)*; small-flowered morning-glory (*Convolvulus simulans)*; and sticky-leaved dudleya (*Dudleya viscida)*.

Finding 3.5.7

The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 High Elevation species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.7:

These species are found primarily in United States Forest Service lands, including the Cleveland National Forest and San Bernardino National Forest which total 202,700 acres of conservation. Many of the plants are Forest Service Sensitive species which adds an additional layer of protection (see Group Designation and Rationale in Volume II: Section B Species Accounts).

San Bernardino mountain kingsnake, San Diego mountain kingsnake, southern rubber boa, beautiful hulsea, California spotted owl, California bedstraw, chickweed oxytheca, Cleveland's bush monkey flower, cliff cinquefoil, graceful tarplant, lemon lily, ocellated Humboldt lily, Plummer's mariposa lily, shaggy-haired alumroot and sticky-leaved dudleya are all species which have specific requirements to be met before being considered Adequately Conserved (see Table 9-3 of the Plan). Many of these species also require execution of a Memorandum of Understanding, that addresses management of these species, with the Forest Service in order to be considered Covered Species Adequately Conserved (Table 9-3 of the MSHCP).

San Bernardino mountain kingsnake and San Diego mountain kingsnake populations are narrowly defined with the Plan Area. San Diego mountain kingsnake occurs only within the Santa Ana Mountains, Agua-Tibia Mountains, and Desert Transition Bioregions above 500 meters in elevation. San Bernardino mountain kingsnake is found only within the San Bernardino Mountains and San Jacinto Mountains bioregions above 1,500 meters in elevation. Both species are found in rock outcrops, talus and steep shady canyons within coniferous and mixed coniferous, hardwood or riparian woodlands.

Implementation of the Plan will result in the loss of approximately 2,723 acres of potential habitat for the San Diego mountain kingsnake and 7,571 acres of potential habitat for the San Bernardino mountain kingsnake (page R-95, Volume II: Section B Species Accounts and pages 4.1-36 and -37 of Volume IV: EIR/EIS). In the Plan there are two biological objectives which will ensure that impacts on these species are mitigated to below a level of significance: 1) include within the Conservation Area at least 7,708 acres of habitat (see page R-89, Volume II: Section B Species Accounts) for the San Diego mountain king snake and 22,159 acres of habitat (see page R-89) for the San Bernardino mountain kingsnake; and, 2) include within the Conservation Area suitable microhabitat for each respective species. In addition, both species require that the Plan maintain (once every 8 years) the continued use of 75% of the Core Areas (page R-95, Volume II: Section B Species Accounts). These species are also two of 29 species which require a Memorandum of Understanding with the Forest Service to address management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

Southern rubber boa is a species found within the San Jacinto Mountains in fallen debris, rock piles and steep, rocky montane areas above 1,540 meters in elevation. The Plan states that this species will respond to a landscape level of management and that the only known core population is located on Mount San Jacinto. The Plan states that quantification of take for this species is difficult due to the lack of point data, but approximately 155 acres of potential habitat for this species is outside the Conservation Area (page R-109, Volume II: Section B Species Accounts). In the Plan there is one biological objective which will ensure that impacts on this species are mitigated to below a level of significance: include 2,577 acres of chaparral, grassland, montane coniferous forest, deciduous woodlands and forest above 1,540 meters in elevation. In addition, this species requires that the Plan maintain (once every eight (8) years) the continued use of 75% of the Core Areas (page R-95, Species Accounts). Southern rubber boa is also one of 29 species which requires a Memorandum of Understanding with the Forest Service to address management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

California spotted owl has a sparse distribution in oak woodland and forest and montane coniferous forest in the Santa Ana Mountains, San Bernardino Mountains and San Jacinto Mountains Bioregions of the Plan Area. California spotted owl is considered a Group 2 species because its conservation requires integration of habitat protection with site-specific monitoring and management. Implementation of the Plan will result in the loss of approximately 16,000 acres of potential habitat for this species (page B-113, Volume II: Section B Species Accounts and page 4.1-57, Volume IV: EIR/EIS). In the Plan there are two biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include 41,370 acres of suitable habitat within the Conservation Area, and, 2) avoid nesting locations within the Conservation Area (page B-109, Volume II: Section B Species Accounts). This species is a San Bernardino National Forest Sensitive Species which entails additional protection and management (page B-108) and is also a species which requires a Memorandum of Understanding with the Forest Service addressing management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan). This species will benefit from the nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

Nashville warbler is a species which is widely distributed in all Bioregions for migrant movements and montane Bioregions for breeding in the San Bernardino National Forest. The Plan states that this species uses a wide variety of habitats for migrant movement and has specified locations that are identified as core breeding season areas. Implementation of the Plan will result in the loss of approximately 240,570 acres of suitable habitat for this species (page B-356, Volume II: Section B Species Accounts and page 4.1-58, Volume IV: EIR/EIS). In the Plan there are three biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include within the Conservation Area 209,490 acres of suitable breeding habitat (page B-352, Volume II: Section B Species Accounts); 2) include within the Conservation Area at least three (3) Core Areas, as per page B-352; and, 3) include within the Conservation Area 209,290 acres of suitable dispersal or migration habitat and Linkages. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Northern goshawk is not widely distributed within southern California, has been documented as occurring as a breeding bird and has been observed in two nest locations within the Conservation Area. Potential habitat for the goshawk includes deciduous woodland and forest, and coniferous montane forest within the San Bernardino Mountains and San Jacinto Mountain Bioregions. Implementation of the Plan will result in the loss of approximately 12,270 acres of potential habitat outside the Criteria Area and Public/Quasi-Public lands (page B-368, Volume II: Section B Species Accounts and page 4.1-39, Volume IV: EIR/EIS). In the Plan there are three biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 34,020 areas of suitable nesting and wintering habitat; 2) protect and buffer the two known nest sites and any other nest locations; and, 3) maintain the continued use of and successful reproduction at a minimum of 75 percent of the known nesting localities (page B-365, Volume II: Section B Species Accounts). There are no known nest sites outside the Conservation Area and no take of active nests is

permitted. The nest protection policies of the MSHCP apply to Northern goshawk (page 5-6 of Section 5.2.1(5) of the Plan).This species is a San Bernardino National Forest Sensitive Species which entails additional protection and management (page B-364).

Williamson's sapsucker conservation is dependent upon activities within the San Bernardino National Forest and the Mt. San Jacinto State Park. Its habitat is montane coniferous forest dominated by lodgepole pines and firs and oak woodlands and forest. Implementation of the Plan will result in the loss of approximately 12,270 acres of habitat for this species (page 603, Volume II: Section B Species Accounts and page 4.1-57, Volume IV: EIR/EIS). In the Plan there are two biological objectives which will ensure that impacts on this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 34,020 acres of suitable breeding, wintering and dispersal habitat; and, 2) include microhabitat for this species in the Conservation Area (page 601, Volume II: Section B Species Accounts). Williamson's sapsucker requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

California bedstraw, cliff cinquefoil, graceful tarplant, lemon lily, ocellated Humboldt lily, Plummer's mariposa lily, and Mojave tarplant are all species which are restricted to the San Jacinto Mountains, primarily on Forest Service lands. Implementation of the MSHCP will result in the loss of potential habitat, as follows: California bedstraw, 9,180 acres; cliff cinquefoil, 10 acres; graceful tarplant, 156,180 acres; lemon lily, 1,170 acres; ocellated Humboldt lily, 3,820 acres; Plummer's mariposa lily , 64,630 acres; and Mojave tarplant, 27,850 acres (pages P-23, P-67, P-114, P-162, P-234 and P-297 of Volume II: Section B Species Account). In the Plan each of these species has a minimum of two biological objectives, except for Cliff cinquefoil, graceful tarplant, Plummer's mariposa lily and Mojave tarplant which have three objectives. These biological objectives will ensure that impacts on these species are mitigated to below a level of significance.

For California bedstraw, the two objectives are: 1) include within the Conservation Area at least 41,420 acres of suitable habitat, and 2) include within the Conservation Area four of the known occurrences (page P-22, Volume II: Section B Species Accounts). For lemon lily the two objectives are: 1) include within the Conservation Area 10,250 acres of suitable habitat, and 2) include within the Conservation Area the six known localities (P-160, Volume II: Section B Species Accounts). For ocellated Humboldt lily the two objectives are: 1) include within the Conservation Area 7,700 acres of suitable habitat, and 2) include within the Conservation Area four (4) of the known occurrences (see page P-232, Volume II: Section B Species Accounts).

For cliff cinquefoil, the three biological objectives are: include within the Conservation Area at least 1,500 acres of suitable habitat, the two known localities of this species, and confirm five localities of this species as per page P-65, Volume II: Section B Species Accounts. For graceful tarplant the biological objectives are: include within the Conservation Area 129,910 acres of suitable habitat, eight (8) of the known locations (page P-112, Volume II: Section B Species Accounts), and confirm ten (10) localities with 1,000 individuals each. For Plummer's mariposa lily the objectives are: include within the Conservation Area 167,580 acres of suitable habitat,

eight (8) of the known occurrences, and confirm six (6) localities with at least 500 individuals each (page P-295, Volume II: Section B Species Accounts). For Mojave tarplant the objectives are: include within the Conservation Area 80,160 acres of suitable habitat, five of the known localities, and at least four localities occupying at least 100 acres (page P-194, Volume II: Section B Species Accounts). Mojave tarplant will benefit from the Riparian/Riverine Areas and Vernal Pool policies of the MSHCP and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for cliff cinquefoil and graceful tarplant. Some of these differences are related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat and elevation restrictions placed on the definitions. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

California bedstraw, cliff cinquefoil, graceful tarplant, lemon lily, and Plummer's mariposa lily all require a Memorandum of Understanding with the Forest Service that addresses management prior to these species becoming Covered Species Adequately Conserved (page 9-20 of the Plan). Also, California bedstraw, cliff cinquefoil, graceful tarplant, lemon lily and Plummer's mariposa lily are National Forest Sensitive Species which are protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on these species (see Group Designation and Rationale for each species in Volume II: Section B Species Accounts). Graceful tarplant, lemon lily, and Mojave tarplant may benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

Beautiful hulsea is a plant which is restricted to the Agua Tibia, San Jacinto Mountains and San Jacinto Foothills Bioregions, primarily in chaparral and lower montane coniferous forests on Forest Service lands. Implementation of the Plan will result in the loss of approximately 36,060 acres of suitable habitat for this species (page P-4, Volume II: Section B Species Accounts and pages 4.1-76 of Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 106,440 acres of suitable habitat; 2) include within the Conservation Area at least 12 known occurrences; and, 3) confirm 16 localities with populations of no fewer than 50 individuals each. In addition, this is a species which requires a Memorandum of Understanding with the Forest Service in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

California beardtongue is a plant which is restricted to the Desert Transition, San Jacinto Foothills, San Jacinto Mountains, and Santa Ana Mountains, primarily on Forest Service lands in

chaparral, coniferous forest, and pinyon-juniper woodland habitats. Implementation of the Plan will result in the loss of approximately 52,100 acres of potential habitat for this species (page P-17, Volume II: Section B Species Accounts and page 4.1-81, Volume IV: EIR/EIS and Addendum). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 118,110 acres of suitable habitat; and, 2) include within the Conservation Area at least 15 occurrences of this species (page P-15, Volume II: Section B Species Accounts). This species is also designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (page P-14).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for California beardtongue. These differences are primarily related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat, and particularly the Riverside Lowlands bioregion which includes most of the existing urban development in the Plan Area but also includes large remaining habitat areas. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

Cleveland's bush monkeyflower is restricted to the Santa Ana and Agua Tibia mountains, primarily on Forest Service lands in chaparral and lower montane coniferous forests. Implementation of the Plan will result in the loss of approximately 790 acres of potential habitat (page P-61, Volume II: Section B Species Accounts and page 4.1-78, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include at least 10,870 acres of suitable habitat; and, 2) include within the Conservation Area the two known localities of this species (page P-59, Volume II: Section B Species Accounts). This species also requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

Engelmann oak is a Group 2 species because of its specialized habitat requirements and limited distribution within the Plan Area to southern oak woodlands and riparian/oak woodlands in the Santa Rosa Plateau area and foothills of the Santa Ana Mountains. Implementation of the Plan will result in the loss of 9,300 acres of the potential habitat for this species (page P-99, Volume II: Section B Species Accounts and page 4.1-82, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 19,070 acres of suitable habitat; 2) include within the Conservation Area at least 33 known occurrences; and, 3) maintain recruitment at a minimum of 80 percent of the conserved populations as per page P-97, Volume II: Section B Species Accounts. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Hall's monardella is a Group 2 species because it has a scattered distribution with known occurrences on Forest Service lands. This species is restricted to chaparral, lower montane coniferous forest, woodlands and forest, and valley and foothill grasslands in the Santa Ana Mountains, San Bernardino Mountains and the Agua Tibia Mountains. Implementation of the Plan will result in the loss of 83,530 acres (page P-121, Volume II: Section B Species Accounts and page 4.1-79, Volume IV: EIR/EIS). The two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance are: 1) include in the Conservation Area at least 224,860 acres of suitable habitat, and 2) include within the Conservation Area the five known locations of this species (page P-119, Volume II: Section B Species Accounts). This species is also designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (page P-118).

Heart-leaved pitcher sage is a Group 2 species because of its restriction to the Santa Ana Mountains, primarily on Forest Service lands in chaparral and woodlands and forests. Implementation of the MSHCP will result in the loss of approximately 14,560 acres of habitat for this species (page P-136, Volume II: Section B Species Accounts and page 4.1-77, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 56,950 acres of suitable habitat; 2) include within the Conservation Area at least six (6) known populations in the Santa Ana Mountains; and, 3) conduct surveys for this species in suitable habitat (page P-133, Volume II: Section B Species Accounts and Section 6.3.2 of the MSHCP). This species is also designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-132). Heart-leaved pitcher sage is subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-63 of Section 6.3.2 and the Criteria Area Species Survey Area Figure 6-2 on page 6-64).

Intermediate mariposa lily is a Group 2 species because of its scattered and restricted distribution within certain habitat associations, dry, rocky open slopes and rock outcrops in coastal scrub and chaparral around Vail Lake and Sierra Peak at specific elevations. Implementation of the Plan will result in the loss of approximately 147,550 acres of potential habitat for this species (page P-141, Volume II: Section B Species Accounts and page 4.1-69, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 195,730 acres of suitable habitat; and, 2) include within the Conservation Area at least two of the known localities as per page P-140, Volume II: Section B Species Accounts. This species shall be considered a Species Adequately Conserved only after the species specific conservation objectives are achieved. This species is also designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-139).

Jaeger's milk vetch is a Group 2 species because it has a scattered distribution with several Core Areas near Vail Lake, Aguanga Valley, Sage, Temecula Canyon and at the base of the Agua Tibia Mountains in dry ridges and valleys and open sandy or rocky slopes in coastal scrub,

chaparral, valley and foothill grassland and cismontane woodland habitats. Implementation of the Plan will result in the loss of approximately 223,800 acres of potential habitat for this species (page P-148, Volume II: Section B Species Accounts and page 4.1-67, Volume IV: EIR/EIS). This is a species endemic to northern San Diego County and southern Riverside County. There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 249,440 acres of suitable habitat; and, 2) include in the Conservation Area the seven (7) known localities of this species as per page P-146, Volume II: Section B Species Accounts. This species is also designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-145).

Ocellated Humboldt lily is a Group 2 species because the known occurrences are concentrated within the Santa Ana and Agua Tibia Mountains, primarily on Forest Service lands in riparian areas in lower montane coniferous forest and coastal chaparral. Implementation of the Plan will result in the loss of approximately 3,280 acres of potential habitat (page P-234, Volume II: Section B Species Account and page 4.1-77, Volume IV: EIR/EIS). The biological objectives which will ensure that impacts to this species are mitigated to below a level of significance are: 1) include within the Conservation Area at least 7,700 acres of suitable habitat; and, 2) include within the Conservation Area at least four of the known locations (page P-232, Volume II: Section B Species Accounts). This species also requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Palomar monkeyflower is a Group 2 species because it has a scattered distribution and known occurrences in chaparral and montane coniferous forest in the Santa Ana, Agua Tibia and San Jacinto Mountains. Implementation of the Plan will result in the loss of approximately 8,940 acres of potential habitat for this species (page P-257, Volume II: Section B Species Accounts and page 4.1-78, Volume IV: EIR/EIS and Addendum). The biological objectives which will ensure that impacts to this species are mitigated to below a level of significance are: 1) include within the Conservation Area at least 23,800 acres of suitable habitat, and 2) include within the Conservation Area at least 18 of the known locations of this plant in the areas specified on page P-255, Volume II: Section B Species Accounts).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for Palomar monkeyflower. These differences are primarily related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat, and particularly the Riverside Lowlands bioregion which includes most of the existing urban development in the Plan Area but also includes large remaining habitat areas. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion

because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

Prostrate spineflower is a Group 2 species because it has a scattered distribution and only one known core population. This species is found in sandy soil and sandy openings in chamise chaparral, coastal sage scrub and grasslands at a certain elevation in the Agua Tibia and Santa Ana Mountains Bioregions. Implementation of the Plan will result in the loss of approximately 31,590 acres of potential habitat for this species (page P-309, Volume II: Section B Species Accounts and page 4.1-71, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 64,000 acres of suitable habitat; and, 2) include within the Conservation Area at least 14 of the known locations as per page P-307 of the Species Account.

Shaggy-haired alumroot is a Group 2 species because it is restricted to the San Jacinto and Santa Rosa Mountains, primarily on Forest Service and State Park lands in rock areas and granite crevices within upper-montane coniferous forest and subalpine coniferous forest. Implementation of the Plan will result in the loss of approximately 2,210 acres of potential habitat for this species (page P-380, Volume II: Section B Species Accounts and page 4.1-75, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 7,760 acres of suitable habitat; and, 2) include within the Conservation Area the two (2) known localities of this plant as per page P-378 of the Species Account. This species is designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-377). This species also requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

Small-flowered morning-glory is a Group 2 species because it is restricted to particular soils and is known from several Core Areas in the Riverside Lowlands, San Jacinto Foothills and Santa Ana Mountains Bioregions in open sage scrub and grasslands. Implementation of the Plan will result in the loss of 143,210 acres of potential habitat for this species (page P-405, Volume II: Section B Species Accounts and page 4.1-72, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 100,690 acres of suitable habitat; and, 2) include within the Conservation Area at least eight (8) of the known localities as per page P-403 of the Species Account.

Sticky-leaved dudleya is a Group 2 species because it is restricted to coastal sage scrub and chaparral on north-facing steep, rocky canyon slopes in the Santa Ana Mountains and San Mateo Wilderness Ares. Implementation of the Plan would result in the loss of 26,740 acres of potential habitat for this species (page P-430, Volume II: Section B Species Accounts and page 4.1-73, Volume IV: EIR/EIS and Addendum). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 71,290 acres of suitable habitat; and, 2) include within the

Conservation Area the three populations in the San Mateo Wilderness (page P-429). This species is designated as a Forest Service Sensitive Species which is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-428). This species also requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for sticky-leaved dudleya. Some of these differences are related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat and elevation restrictions placed on the definitions. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 High Elevation species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.8 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these 10 Group 2 Riparian/Aquatic species: arroyo chub (*Gila orcuttii)*; Cooper's hawk (*Accipiter cooperii)*; downy woodpecker (*Picoides pubescens)*; least Bell's vireo (*Vireo bellii pusillus)*; tree swallow (*Tachycineta bicolor)*; yellow-breasted chat (*Icteria virens)*; yellow warbler (*Dendroica petechia brewsteri)*; bobcat (*Lynx rufus)*; California black walnut (*Juglens californica* var *californica)*; and Fish's milkwort (*Polygala cornuta* var. *fishiae*).

Finding 3.5.8 The Department finds that changes or alterations have been required in or incorporated into the MSHCP which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 Riparian/Aquatic

species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.8:

Arroyo chub is a Group 2 species because it occurs in several locations within the Santa Ana and Santa Margarita watersheds in open water and emergent vegetation in lower gradient streams with sand or mud substrate. Only six drainages currently support this species. Implementation of the Plan will result in the loss of 520 acres of potential habitat for this species (page F-6 & 7, Volume II: Section B Species Accounts and page 4.1-32, Volume IV: EIR/EIS and Addendum). There are five biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 4,580 acres of habitat; 2) include within the Conservation Area suitable Core Areas for this species and natural stream conditions; 3) include within the Conservation Area specific habitat in the Santa Margarita Watershed (page F-2, Volume II: Section B Species Accounts); 4) Reserve Managers in the watershed will assess the range of the arroyo chub's movements and identify measures to restore and maintain connectivity; and, 5) Reserve Managers in the watershed will undertake research into the species' requirements and identify measures to restore stream conditions and habitat to benefit the species as per page F-3 of the Species Account. This species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

The acreages reflect different flooding conditions/assumptions in the Prado Basin area in the MSHCP/NCCP and Biological Opinion analyses. The MSHCP/NCCP assumed a "normal" rainfall year in this area while the Biological Opinion assumed flooding of the 100-year floodplain in Prado Basin. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analysis in either the MSHCP/NCCP or the Biological Opinion because essentially the entire Prado Basin is within public ownership and is assumed to be included in the MSHCP Conservation Area.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

The Cooper's hawk, downy woodpecker, least Bell's vireo, tree swallow, yellow-breasted chat and yellow warbler all are widely distributed in riparian zones in the Plan Area. Basic riparian Core Areas include Prado Basin, the Santa Ana River, San Timoteo Canyon, Temescal Wash, Temecula Creek, Vail Lake, and Wilson Valley. Cooper's hawk, downy woodpecker, tree swallow and yellow warbler also utilize Forest Service lands for foraging and/or breeding. Implementation of the Plan will result in the loss of potential habitat for these species: Cooper's hawk, 22,100 acres; downy woodpecker, 12,710 acres; least Bell's vireo, 2,780 acres; tree swallow 14,580 acres; yellow-breasted chat, 2,780 acres; and yellow warbler, 12,710 acres

(pages B-158, 189, 260, 511, 628 and 640, Volume II: Section B Species Accounts, and pages 4.1-38, 4.1-55, 4.1-57, 4.1-50 and 4.1-58 of Volume IV: EIR/EIS).

Most of these species have the two basic biological objectives of conserving a specified number of acres and number of Core Areas. There are two biological objectives for Cooper's hawk which will ensure that impacts to this species are mitigated to below a level of significance: include within the Conservation Area 54,580 acres of suitable habitat and 10 Core Areas as specified (page B-155, Volume II: Section B Species Accounts). There are three biological objectives for the downy woodpecker which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area 34,080 acres of suitable habitat; 2) include within the Conservation Area five (5) Core Areas and Linkages (page B-186, Volume II: Section B Species Accounts); and, 3) include within the Conservation Area microhabitat. Least Bell's vireo has four biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 9,430 acres of suitable habitat; 2) include within the Conservation Area at least eight (8) Core Areas and Linkages; 3) include within the Conservation Area additional areas identified as important to this species; and, 4) within the Conservation Area maintain (once every three (3) years) the continued use of and successful reproduction at 75 percent of the known vireo occupied habitat (pages B-256 and B-257, Volume II: Section B Species Accounts). There are three biological objectives for the tree swallow which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 44,420 acres of habitat; 2) include within the Conservation Area the six (6) known Core Areas including breeding populations; and, 3) include within the Conservation Area microhabitat (page B-508, Volume II: Section B Species Account). There are three biological objectives for the yellow-breasted chat which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area 9,430 acres of suitable habitat; 2) include within the Conservation Area at least five Core Areas; and, 3) maintain (once every five years) the continued use of and successful reproduction at 75 percent of the Core Areas (page 625, Volume II: Section B Species Accounts). There are three biological objectives for yellow warbler which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 34,080 acres of suitable habitat; 2) include within the Conservation Area nine (9) Core Areas; and, 3) maintain (once every five years) the continued use of and successful reproduction at 75 percent of the Core Areas (page B-636, Volume II: Section B Species Accounts).

These species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.). In addition, Cooper's hawk will benefit from the nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

Bobcat is found throughout the Plan Area and requires large expanses of brushy and rocky habitats near springs or other water sources, as well as Linkages for dispersal. Implementation of the Plan will result in the loss of 347,000 acres of suitable habitat (page M-24, Volume II: Section B Species Accounts and page 4.1-63, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of

significance: 1) include within the Conservation Area at least 469,063 acres of suitable habitat; 2) include Linkages within the Conservation Area as specified on page M-21, Volume II: Section B Species Account; and, 3) maintain or improve dispersal routes and evaluate the under-crossings specified on page M-21 of the Species Account.

California black walnut is a Group 2 species because of its specialized habitat requirements and limited distribution in the Plan Area in woodlands and riparian woodlands in the Santa Ana Mountains Bioregion. Implementation of the Plan will result in the loss of 3,830 acres of suitable habitat (page P-30, Volume II: Section B Species Accounts and page 4.1-76, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 6,100 acres of suitable habitat; and, 2) include within the Conservation Area at least seven (7) known occurrences of this species at locations designated on page P-28, Volume II: Section B Species Account. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Fish's milkwort is a Group 2 species because of its restriction to cismontane oak woodlands and riparian woodlands along the eastern slopes of the Santa Ana Mountains and possibly the northern slopes of the Agua Tibia Mountains. There are 198,790 acres of potential habitat for this species. Implementation of the Plan will result in the loss of 75,210 acres of potential habitat (page P-107, Volume II: Section B Species Accounts and page 4.1-82, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 123,580 acres of suitable habitat; 2) include within the Conservation Area at least three (3) of the known localities of this species; and, 3) within the Conservation Area confirm at least 10 localities with at least 50 individuals. This species also requires that Biological Objective 3 be satisfied in order for Fish's milkwort to become a Covered Species Adequately Conserved (P-105, Volume II: Section B Species Accounts). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 Riparian/Aquatic species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.9 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 2 Vernal Pool/Aquatic species: vernal barley (*Hordeum intercedens*); western spadefoot (*Scaphiopus hammondii*); and California muhly (*Muhlenbergia californica*).

Finding 3.5.9 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 Vernal Pool/Aquatic species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.9:

Western spadefoot is widely distributed throughout the Riverside Lowlands and San Jacinto Foothills Bioregions in vernal pools or other standing water free of exotic species, with adjacent secondary habitat including adjacent chaparral, sage scrub, grassland and alluvial scrub habitats. Implementation of the Plan will result in the loss of 1,162 acres of suitable habitat (page A-66, Volume II: Section B Species Accounts and page 4.1-33, Volume IV: EIR/EIS). There are four biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 6,749 acres of primary habitat; 2) include within the Conservation Area at least six (6) Core Areas (page A-63, Volume II: Section B Species Account); 3) include within the Conservation Area at least 377,183 acres of suitable secondary habitat adjacent to primary habitat; and, 4) maintain successful reproduction at a minimum of 75% of the conserved breeding locations once every eight (8) years. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Vernal Barley is a Group 2 species because of its limited geographic distribution and specialized habitat requirements and management requirements for floodplain processes. There are 12 known populations concentrated in two areas, the San Jacinto River near Perris and the upper Salt Creek drainage near Hemet. Implementation of the Plan will result in the loss of 1,370 acres of suitable habitat (page P-456, Volume II: Section B Species Accounts and page 4.1-75, Volume IV: EIR/EIS and Addendum). There are four biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 6,900 acres of suitable habitat in indicated locations; 2) include within the Conservation Area at least four (4) locations of vernal barley in indicated locations; 3) include the floodplain in conserved areas and maintain floodplain processes; and 4) include within the Conservation Area the floodplain along Salt Creek in its existing condition (page P-454, Volume II: Section B Species Account). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the

MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

The MSHCP used specific "models" for vernal barley and did not consolidate or generalize factors such as clayey soils, alkali soils and Santa Rosa Plateau basalt flows. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because the analyses in both the MSHCP/NCCP and the Biological Opinion assumed similar levels of conservation of the factors considered in the models including clayey soils, alkali soils and Santa Rosa Plateau basalt flows.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

California muhly is a Group 2 species because of its wide distribution within specific habitat associations. Potential habitat for this species includes chaparral, coastal sage scrub, montane coniferous forest, meadow, and meadow/marshes. Implementation of the Plan will result in the loss of 221,350 acres of suitable habitat (page P-38, Volume II: Section B Species Accounts and page 4.1-79, Volume IV: EIR/EIS). There are 3 biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 368,200 acres of suitable habitat; 2) include within the Conservation Area the known locations (page P-36, Volume II: Section B Species Account); and, 3) confirm 10 localities containing at least 50 clumps. Compliance with biological objective number 4 must be satisfied prior to California muhly becoming a Covered Species Adequately Conserved. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 Riparian/Aquatic species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.10 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 2 Wetland/Marsh/Lake species: American bittern (*Botaurus lentiginosus*); black crowned night heron (*Nycticorax nycticorax*); double-crested cormorant (*Phalacrocorax auritus*); great blue heron (*Ardea herodias*); osprey (*Pandion haliaetus*); and white-faced ibis (*Plegadis chihi*).

Finding 3.5.10 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 Wetland/Marsh/Lake species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.10:

American bittern is sparsely-distributed throughout the Plan Area but is not predictably found in all suitable areas. It inhabits margins surrounding open water bodies and freshwater marshes with emergent vegetation in the Mystic Lake/San Jacinto Wildlife Area, Santa Ana River/Prado Basin, and Collier Marsh. Implementation of the Plan will result in the loss of 60 acres of suitable habitat (page B-4, Volume II: Section B Species Accounts and page 4.1-44, Volume IV: EIR/EIS). There are four biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area at least 410 acres of suitable nesting and foraging habitat; 2) include within the Conservation Area at least three (3) Core Areas, as per page B-2, Volume II: Section B Species Account; 3) establish a 100-meter buffer around emergent vegetation; and 4) maintain the continued use of 50% of Core Areas every eight (8) years (page B-2). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Black-crowned night heron is a Group 2 species because it is relatively well-distributed throughout the Plan Area but is not predictably distributed within all suitable habitat. It is found in Mystic Lake/San Jacinto Wildlife Area, Prado Basin/Santa Ana River, and Collier Marsh at open water bodies where emergent or riparian vegetation is present. Implementation of the Plan will result in the loss of 2,840 acres of suitable habitat (page B-45, Volume II: Section B Species Accounts and page 4.1-52, Volume IV: EIR/EIS). There are three biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area at least 16,560 acres of suitable nesting and foraging habitat; 2) include within the Conservation Area the three (3) known and historic breeding locations; and, 3) utilize a 100-meter buffer around Core Areas identified in objective 2 (see page B-42). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

Double-crested cormorant, great blue heron and osprey occur in open water bodies in the Plan Area. Possible core locations include the Santa Ana River, Lake Mathews, Lake Elsinore, Canyon Lake, Vail Lake, Lake Skinner, Lake Perris, Mystic Lake and Lake Hemet. Implementation of the Plan will result in the loss of suitable habitat for these species: double-crested cormorant, 2,180 acres; osprey, 2,140 acres; and great blue heron, 2,840 acres (pages B-174, -399, and -242, Volume II: Section B Species Accounts and pages 4.1-55, 4.1-54, and 4.1-43, Volume IV: EIR/EIS). Each species includes biological objectives which will ensure that impacts are mitigated to below a level of significance. For double-breasted cormorant the two biological objectives are: include within the Conservation Area 16,100 acres of open water habitat within seven open water bodies and include the known double-crested cormorant rookery (page B-172, Volume II: Section B Species Accounts). For great blue heron the biological objectives are: 1) include within the Conservation Area 16,560 acres of suitable habitat; 2) include within the Conservation Area the three (3) known breeding locations; and 3) establish a 100-meter buffer around Objective 2 Core Areas (page B-239, Volume II: Section B Species Accounts). For osprey the biological objectives are: 1) include within the Conservation Area 10,340 acres of open water habitat; 2) include within the Conservation Area 5,520 acres of suitable riparian and open water habitat in the Prado Basin and Santa Ana River; and 3) establish a 100-meter buffer around water bodies identified in objective 1 (page B-397, Volume II: Section B Species Accounts). These species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.). In addition, osprey is subject to the nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

White-faced ibis is a Group 2 species because it is sparsely distributed throughout the Riverside Lowlands Bioregion, occurs at some freshwater marsh habitat and utilizes a wide variety of habitats for foraging. Implementation of the Plan will result in the loss of 60 acres of suitable habitat for this species (page B-576, Volume II: Section B Species Accounts and page 4.1-56, Volume IV: EIR/EIS). Two documented breeding locations are Prado Basin and Mystic Lake/San Jacinto Wildlife Area. There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include in the Conservation Area at least 340 acres of suitable primary breeding habitat; 2) include in the Conservation Area the two (2) known breeding locations; and, 3) include in the Conservation Area at least 57,620 acres of suitable secondary foraging habitat (riparian, vernal pools, playas, agriculture, etc.) (page B-573, Volume II: Section B Species Accounts). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 Wetland/Marsh/Lake species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under

CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.11 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 2 Grassland species: California horned lark, (*Eremophila alpestris actia*); golden eagle (*Aquila chrysaetos*); grasshopper sparrow (*Ammodramus savannarum*); loggerhead shrike (*Lanius ludovicianus*); white-tailed kite (*Elanus leucurus*); Stephens' kangaroo rat (*Dipodomys stephensi*); and long-spined spineflower (*Chorizanthe polygonoides* var *longispina*).

Finding 3.5.11 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 Grassland species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.11:

California horned lark, grasshopper sparrow, loggerhead shrike and white-tailed kite are all bird species which are widely distributed in the Plan Area in a variety of habitats. Implementation of the Plan will result in the loss of suitable habitat for this species: California horned lark, 284,800 acres; grasshopper sparrow, 93,350 acres; loggerhead shrike, 318,540 acres; and white-tailed kite, 400,190 acres (pages B-100, B-228, B-295, B-590, Volume II: Section B Species Accounts and pages 4.1-48, 4.1-41, 4.1-51, and 4.1-48, Volume IV: EIR/EIS).

All these species have biological objectives which will ensure that impacts to these species are mitigated to below a level of significance. Each species has an objective for conservation of acreage: for California horned lark 153,750 acres; for grasshopper sparrow 38,690 acres; for loggerhead shrike 167,590 acres; and, for white-tailed kite 19,880 acres. The second biological objective for California horned lark is to include within the Conservation Area at least three (3) Core Areas and a portion of a fourth (page B-97 and B-98). Biological objective 2 for grasshopper sparrow is a requirement to maintain occupancy within 3 large Core Areas (100%) and at least 3 of the 4 smaller Core Areas (75%) in at least 1 year out of any 5 consecutive years. In order for grasshopper sparrow to become a Covered Species Adequately Conserved, the requirements in Objective 2 on page B-225, Volume II: Section B Species Accounts must be satisfied. There are two additional biological objectives for loggerhead shrike (page B-291). The second biological objective for loggerhead shrike is to include within the Conservation Area at least 8 of 12 breeding and foraging locations constituting Core Areas. The third biological

objective is to maintain (once every 8 years) the continued use of and successful reproduction within 75% of Core Areas identified for this species.

There are four additional biological objectives for white-tailed kite (a state fully protected species), pages B-586 and B-587, Volume II: Section B Species Accounts. Objective 2 is a requirement that there be at least 10 breeding locations in designated areas. Objective 3 is a requirement to include within the Conservation Area 281,890 acres of suitable foraging habitat. Objective 4 requires buffers and protection from disturbance of the known winter roost location and any other identified roost locations. Objective 5 is a requirement to maintain (once every 3 years) the continued use of and successful reproduction at 75% of the core breeding areas. In addition, white-tailed kite will benefit from the Riparian/Riverine Areas and Vernal Pool policies of the MSHCP (Sections 9.2(2)(7) and 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS), Best Management Practices of the MSHCP (Section 9.2(2)(4) of the MSHCP) , and nest protection policy (Section 5.2.1(5)).

Take of this state listed fully protected species is not authorized by the NCCP Permit and is prohibited by the CDFG Code except in certain limited situations (see Fish and Game Code Sections 3511, 4700, 5050, and 5515).

Golden Eagle is a state fully protected species. It is widely distributed as a foraging species throughout the Plan Area, with several known nesting sites. Implementation of the Plan will result in the loss of an estimated 191,770 acres of potential habitat for the golden eagle (page B-212, Volume II: Section B Species Accounts and 4.1-42, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page B-208, Volume II: Section B Species Accounts): 1) include within the Conservation Area at least 164,390 acres of suitable foraging habitat; 2) include within the Conservation Area and protect from disturbance the known nesting locations; and, 3) maintain (once every eight (8) years) the continued use of and successful reproduction at 75% of the known nesting localities. This species will benefit from the nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

Take of this state listed fully protected species is not authorized by the NCCP Permit and is prohibited by the CDFG Code except in certain limited situations (see Fish and Game Code Sections 3511, 4700, 5050, and 5515).

Stephens' kangaroo rat is widespread throughout the Plan Area with main blocks of occupied habitat in Core Areas that must be conserved. Also required are specific monitoring and management measures to track population densities and maintain open, sparse grassland habitat. Implementation of the Plan will result in the loss of 12,940 acres of habitat (page M-203, Volume II: Section B Species Accounts). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page M-198): 1) include within the Conservation Area at least 15,000 acres of occupied habitat as measured in any consecutive eight-year (8) period in a minimum of six (6) Core Areas within the Stephens' kangaroo rat HCP; 2) include at least 3,000 acres of occupied habitat in any eight-year (8) period in a minimum of two (2) Core Areas outside the kangaroo rat HCP; and, 3) maintain at least 30%

of the occupied habitat at a population density of medium or higher as per page M-198 of the Species Account.

The MSHCP/NCCP analysis focused on occupied habitat as defined through extensive work on this species conducted throughout the MSHCP/NCCP Area. The Biological Opinion developed a suitable habitat "model" using vegetation and other relevant environmental factors. The analysis in the MSHCP/NCCP is therefore more reflective of known occupied habitat within the Plan Area while the analysis in the Biological Opinion predicts suitable habitat. The Biological Opinion analysis notes that suitable habitat is likely overestimated based on the model developed for the Opinion. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analysis in either the MSHCP/NCCP or the Biological Opinion because similar levels of conservation of both known occupied areas and predicted suitable habitat are anticipated in both the MSHCP/NCCP and the Biological Opinion.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Long-spined spineflower has a fairly wide distribution within specific soil restrictions and two core locations, but is most prevalent in the vicinity of Lake Mathews and the Agua Tibia Mountains. It can be found in southern needlegrass grassland and openings in coastal sage scrub and chaparral on clay or rocky soils. Implementation of the Plan will result in the loss of 309,020 acres of potential habitat (page P-179, Volume II: Section B Species Accounts and page 4.1-71, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-176): 1) include within the Conservation Area at least 389,510 acres of suitable habitat, as per page P-176 of the Plan; and, 2) include within the Conservation Area at least 32 locations of this species, including the two (2) main Core Areas.

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 Grassland species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.12 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 2 Different Sampling Strategy species: Parry's spineflower (*Chorizanthe parryi* var. *parryi*); peninsular spineflower (*Chorizanthe leptotheca*); rainbow manzanita (*Arctostaphylos rainbowensis*); and small-flowered microseris (*Microseris douglasii* var. *platycarpha*).

Finding 3.5.12 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 2 Different Sampling Strategy species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.12:

These are four (4) plant species that may require a different sampling strategy due to rarity of occurrence, seasonality, geographic location or other restriction. The requirements of the Additional Survey Needs and Procedures are found in Sections 6.1.3, 6.3.2 and 9.2(2)(9) of the Plan.

Parry's spineflower is a Group 2 species because it has a patchy distribution, specialized habitat requirements and management requirements for floodplain processes. It is found primarily on alluvial floodplains and alluvial chaparral and scrub in the Santa Ana, Agua Tibia, San Bernardino and San Jacinto Mountains. Core locations have not been identified. Implementation of the Plan will result in the loss of approximately 127,100 acres of potential habitat (page P-278, Volume II: Section B Species Accounts and page 4.1-70, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-276): 1) include within the Conservation Area 218,603 acres of suitable habitat; 2) include within the Conservation Area 20 occurrences of this species; and, 3) confirm 10 localities with at least 1,000 individuals (page P-276 of the Plan). This species is designated as a Forest Service Sensitive Species and is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-275). This species will benefit from the Riparian/Riverine Areas and Vernal Pool policies of the MSHCP (Sections 9.2(2)(7) and 6.1.2 of the MSHCP), Best Management Practices of the MSHCP (Section 9.2(2)(4) of the MSHCP), and Additional Survey Needs and Procedures 6.1.3, 6.3.2, 9.2(22)(9) of the MSHCP and 4.1-85 of the EIR/EIS.

Peninsular spineflower is a Group 2 species because it has a patch distribution within the Plan Area. It is found on granitic-derived or alluvial surfaces in open areas in the San Bernardino Mountains, San Jacinto Mountains, Agua Tibia Mountains, Temescal Canyon and Santa Ana Mountains. At high elevations it is associated with chaparral, sage scrub and coniferous forest openings. At lower elevations it is associated with old formation alluvial benches.

Implementation of the Plan will result in the loss of approximately 78,150 acres of potential habitat (page P-291, Volume II: Section B Species Accounts and page 4.1-70, Volume IV: EIR/EIS). The biological objectives will ensure that impacts to this species are mitigated to below a level of significance (page P-289): 1) include within the Conservation Area at least 206,010 acres of suitable habitat; and, 2) confirm 10 localities with at least 1,000 individuals. Core locations have not been identified. This species also requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

Rainbow manzanita is a Group 2 species because of its specialized habitat and soils requirements and scattered distribution. It is found on ultramafic southern mixed chaparral on gabbro soils or related soils and restricted to the eastern slopes of the Santa Ana Mountains and the northern slopes of the Agua Tibia Mountains. Implementation of the Plan will result in the loss of approximately 29,920 acres of potential habitat (page P-317, Volume II: Section B Species Accounts and page 4.1-67, Volume IV: EIR/EIS). There are three (3) biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-315): 1) include within the Conservation Area at least 37,260 acres of suitable habitat; 2) include within the Conservation Area the 15 known localities; and, 3) confirm 10 localities with more than 50 individuals each. This species is designated as a Forest Service Sensitive Species and is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-314). This species also requires a Memorandum of Understanding with the Forest Service that addresses management in order to become a Covered Species Adequately Conserved (page 9-20 of the Plan).

Small-flowered microseris has a scattered distribution, is known from several Core Areas and is restricted to particular soils series. It is associated with perennial grasslands on clay lenses and on the periphery of vernal pools in the western portion of the Plan Area. Implementation of the Plan will result in the loss of approximately 94,380 acres of potential habitat (page P-397, Volume II: Section B Species Accounts and page 4.1-78, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-394): include within the Conservation Area 45,290 acres of suitable habitat; 2) include within the Conservation Area eight (8) of the known locations; and, 3) confirm 10 localities with at least 1,000 individuals within the Conservation Area. Take of this species is contingent upon demonstration of compliance with Objective 3 (P-393).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 2 Different Sampling Strategy species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-

specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.13 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 3 Coastal Sage Scrub species: Cactus wren (*Campylorhynchus brunneicapillus*); and Brand's phacelia (*Phacelia stellaris*).

Finding 3.5.13 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 3 Coastal Sage Scrub species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.13:

Group 3 species are those where coverage is warranted based upon site specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined habitat or limited geographic area within the Plan Area.

Cactus wren is a Group 3 species because it is narrowly distributed at a few locations. It is found in patches of cactus-dominated sage scrub habitat in the Riverside Lowland and San Jacinto Foothill Bioregions. Implementation of the Plan will result in the loss of 63,700 acres of potential habitat for this species (page B-88, Volume II: Section B Species Accounts and page 4.1-45, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page B-84): 1) include within the Conservation Area at least 77,070 acres of suitable habitat; 2) include within the Conservation Area at least 11 Core Areas and Linkages; and, 3) include within the Conservation Area microhabitat in potential nesting habitat. This species is designated as a Forest Service Sensitive Species and is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (page 9-20 of the Plan).

Brand's phacelia is a Group 3 species because of its limited geographic distribution, specialized habitat requirements, and management requirements for floodplain processes. It is restricted to sandy benches along the Santa Ana River. Implementation of the Plan will result in the loss of 11,800 acres of potential habitat for this species (page P-11, Volume II: Section B Species Accounts and page 4.1-81, Volume IV: EIR/EIS and Addendum). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-9): 1) include within the Conservation Area at least 6,100 acres of suitable habitat; 2) include within the Conservation Area the two known localities; and, 3) conduct surveys as part of the project review process for public and private projects within the Narrow

Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies (Sections 9.2(2)(7) and 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum), Best Management Practices (Section 9.2(2(4) of the MSHCP) and the Protection of Narrow Endemic Plant Species policies (Sections 6.1.3 and 9.2(2)(8) of the MSHCP).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 3 Coastal Sage Scrub species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for Brand's phacelia. These differences are primarily related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat, and particularly the Riverside Lowlands bioregion which includes most of the existing urban development in the Plan Area but also includes large remaining habitat areas. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

Impact 3.5.14 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 3 High Elevation species: arroyo toad (*Bufo californicus*); California red-legged frog (*Rana aurora draytonii*); coast range newt (*Taricha tarosa tarosa*); mountain yellow-legged frog (*Rana mucosa*); purple martin (*Progne subis*); San Bernardino flying squirrel (*Glaucomys sabrinus californicus*); Hammitt's clay cress (*Sibaropsis hammittii*); Johnston's rock cress (*Arabis johnstonii*); many-stemmed dudleya (*Dudleya multicaulis*); Munz's mariposa lily (*Calochortus palmeri* var *munzii*); Nevin's barberry (*Berberis nevinii*); San Miguel savory (*Satureja chandleri*); Vail Lake ceanothus (*Ceanothus ophiochilus*); San Jacinto Mountains bedstraw (*Galium angustifolium* ssp. *jacinticum*).

Finding 3.5.14 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 3 High Elevation species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.14:

Arroyo toad, California red-legged frog, coast range newt and mountain yellow-legged frog are all species which have narrow habitat requirements and limited distribution. Arroyo toad is limited to middle reaches of third order streams with known populations (see page A-1, Volume II: Section B Species Account). California red-legged frog is limited to lowland streams, wetlands and pools where dense vegetation surrounds deep water with small watersheds and upland breeding habitat areas. The one known population is the Santa Rosa Plateau. Coast range newt is restricted to the Santa Ana Mountains in "pools and runs" stream configurations and adjacent upland habitat. Mountain yellow-legged frog is restricted to streams, creeks and small pools in the San Jacinto Mountains with year-round cool water.

Implementation of the Plan will result in loss of habitat for these species: arroyo toad, 296 acres; California red-legged frog, 47 acres of breeding habitat and 9,371 acres of secondary upland habitat; coast range newt, 4,011 acres of potential breeding habitat and 32,069 acres of secondary upland habitat; and mountain yellow-legged frog 138 acres of breeding habitat and 11,459 acres of secondary habitat (pages A-7, A-24, A-39, A-52, Volume II: Section B Species Accounts and page 4.1-34, Volume IV: EIR/EIS).

All of these species (except coast range newt) have in common six (6) biological objectives which will ensure that impacts to the respective species are mitigated to below a level of significance. The first two conditions relate to the number of conserved habitat acres and number of Core Areas: arroyo toad, include within the Conservation Area 1,602 acres of suitable breeding habitat and at least nine Core Areas (page A-2); California red-legged frog, include within the Conservation Area 766 acres of occupied and historic breeding habitat and Core Areas in the Santa Rosa Plateau and southern Santa Ana Mountains (page A-19); coast range newt, include within the Conservation Area 8,441 acres of primary breeding habitat and 76,579 acres of secondary habitat; and mountain yellow-legged frog, include within the Conservation Area 335 acres of primary breeding habitat and specified elevational portions of Core Areas as per Objective 2, page A-48.

Objective 3 for the species concerns adjacent upland habitat: arroyo toad, include within the Conservation Area 7,005 acres of suitable upland habitat at specified locations (page A-2); California red-legged frog, include within the Conservation Area 39,147 acres of upland habitat adjacent to occupied or suitable breeding habitat (page A-19); and mountain yellow-legged frog, include within the Conservation Area 32,399 acres of the secondary wooded habitat as per page A-48.

Objective 4 concerns conducting surveys for arroyo toad, California red-legged frog, and mountain yellow-legged frog as part of the project review process for public and private projects within the amphibian species survey area where suitable habitat is present (Figure 6-3 of Volume I of the Plan).

Objective 5 for these species (Objective 4 for coast range newt) is a requirement to maintain or restore ecological processes within occupied habitat and suitable new areas at specified locations (pages A-3, A-20, A-35, and A-49).

Objective 6 is a condition regarding maintaining breeding populations or reproductive success: for arroyo toad, maintain breeding populations at a minimum of 80 percent of the conserved breeding locations across any five (5) consecutive years; for California red-legged frog and mountain yellow-legged frog, determine if successful reproduction is occurring once a year for the first five years after permit issuance and then not less than every eight years (pages A-3, A-20, and A-49 of the Plan).

Coast range newt has three non-standard conditions: 1) establish a 100-meter buffer around emergent vegetation; 2) maintain or restore ecological processes; and 3) maintain occupancy of at least 75% of the occupied coast range new habitat and determine if successful reproduction is occurring (see pages A-2 &3, A-19 & 20, A-35, and A-48 & A-49).

Arroyo toad, California red-legged frog and mountain yellow-legged frog are subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-65 of Section 6.3.2 and the Amphibian Species Survey Areas with Criteria Area, Figure 6-3 on page 6-66 of the MSHCP). In addition, these species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Purple martin is a Group 3 species because it has low numbers spread over the Plan Area. It has specialized nest requirements (two known nests) and is typically found in association with water. Implementation of the Plan will result in the loss of 17,810 acres of potential habitat for this species (page B-438, Volume II: Section B Species Accounts and page 4.1-56, Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 45,020 acres of nesting and foraging habitat; 2) include within the Conservation Area the two (2) Core Areas; and, 3) include within the Conservation Area micro-habitat in potential nesting areas (page B-435). This species is also designated as a San Bernardino National Forest Sensitive Species and is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (page B-434). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

San Bernardino flying squirrel only occurs in the San Jacinto Mountains, primarily on Forest Service lands. It is a species which has a narrow distribution and requires site-specific

monitoring. Implementation of the Plan will result in the loss of approximately 9,404 acres of potential habitat (page M-140, Volume II: Section B Species Accounts and page 4.1-62, Volume IV: EIR/EIS). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 19,476 acres of suitable habitat; and, 2) confirm occupation of 1000 hectares (2470 acres) with a mean density of at least two (2) individuals per hectare (page M-137). This species is also designated as a Forest Service Sensitive Species and is protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (M-136). Take of this species is not included in this permit until conservation of the species has been demonstrated by achieving Objective 2.

Hammitt's clay-cress and Johnston's rock cress are both species with limited geographic distribution and special habitat requirements. Hammitt's clay cress is found in the Elsinore Peak area of the Santa Ana Mountains in grassland. Johnston's rock cress is endemic to the San Jacinto Mountains in chaparral and pine forest habitat. Implementation of the Plan will result in the loss of habitat for each species: Hammitt's clay cress, 15,825 acres; and, Johnston's rock cress, 11,810 acres (page P-129 and P-156, Volume II: Section B Species Accounts and pages 4.1-84 and 4.1-66, Volume IV: EIR/EIS). Each species has three biological objectives which will ensure that impacts to these species are mitigated to below a level of significance. The objectives for Hammitt's clay-cress are to include within the Conservation Area 21,260 acres of suitable habitat and include the Core Area for this species. The objectives for Johnston's rock cress are to include within the Conservation Area 34,975 acres of suitable habitat and the two Core Areas, including 17 of the known occurrences. Objective 3 for both species involves conducting surveys as part of the project review process for public and private projects within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). Both plants are subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan).

Many-stemmed dudleya and San Miguel savory are all limited in geographic distribution with specialized habitat requirements. Many-stemmed dudleya is found in the Santa Ana Mountains Bioregion and Riverside Lowlands Bioregion in openings in chaparral, coastal sage scrub and grassland underlain by specific soils. San Miguel savory is restricted to rocky, gabbroic and metavolcanic substrates in coastal sage scrub, chaparral, cismontane woodland, riparian woodland and grasslands in the Santa Rosa Plateau and Santa Ana Mountains. Implementation of the Plan will result in the loss of habitat for each species: many-stemmed dudleya, 185,710 acres; and, San Miguel savory, 224,550 acres (pages P-187 and P-364, Volume II: Section B EIR/EIS and pages 4.1-72 and 4.1-83 and Addendum). Each species has three biological objectives which will ensure that impacts to these species are mitigated to below a level of significance. The first two objectives for many-stemmed dudleya are: include within the Conservation Area 142,680 acres of suitable habitat and at least 26 of the known occurrences of this plant at specified locations (page P-184). The first two objectives for San Miguel savory are: include within the Conservation Area 201,450 acres of suitable habitat and at least seven of the known locations at specified sites (page P-361). Objective 3 for both species involves conducting surveys as part of the project review process for public and private projects within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area

Map, Figure 6-1 of the Plan). Both plants are subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan). These species are also designated as Forest Service Sensitive Species and are protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (page P-183 and P-360). In addition, San Miguel savory will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for San Miguel savory. These differences are primarily related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat, and particularly the Riverside Lowlands bioregion which includes most of the existing urban development in the Plan Area but also includes large remaining habitat areas. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

Munz's mariposa lily and San Jacinto Mountains bedstraw are restricted to the San Jacinto Mountains, primarily on Forest Service lands. Munz's mariposa lily is found in lower montane coniferous forest, chaparral and meadows in the San Jacinto Mountains Bioregion. San Jacinto Mountains bedstraw is found in lower montane mixed forest and coniferous forest in the San Jacinto Mountains. Implementation of the Plan will result in the loss of suitable habitat for these species: Munz's mariposa lily, 9,880 acres; and, San Jacinto Mountains bedstraw, 8,545 acres (page P-210 and P-346, Volume II: Section B Species Accounts and pages 4.1-68 and 4.1-73 , Volume IV: EIR/EIS). There are three biological objectives which will ensure that impacts to these species are mitigated to below a level of significance. The first two objectives for Munz's mariposa lily are: include within the Conservation Area 33,470 acres of suitable habitat and 10 of the known locations within the San Jacinto Mountains (page P-207). The first two objectives for San Jacinto Mountains bedstraw are: include within the Conservation Area 12,125 acres of suitable habitat and at least eight of the known locations as specified (page P-343). Objective 3 for both species involves conducting surveys as part of the project review process for public and private projects within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). Both plants are subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan). These species are designated as Forest Service Sensitive Species and are protected through the implementation of forest plans and the biological evaluation process which considers the potential effects of Forest Service activities on this species (P-206 and P-342).

Nevin's barberry has a narrowly defined distribution and is dependent upon natural fire regimes. It is found on coarse soils and rocky slopes in chaparral and gravelly wash margins in alluvial scrub in the San Timoteo/Badlands area, Vail Lake and Agua Tibia Mountains. Implementation of the Plan will result in the loss of 3,990 acres of suitable habitat for this species (page P-227, Volume II: Section B Species Accounts). The three biological objectives which will ensure that

impacts to this species are mitigated to below a level of significance are: 1) include within the Conservation Area 8,000 acres of suitable habitat; 2) conserve the known locations in the Conservation Area; and, 3) conduct surveys as part of the project review process for public and private projects. Nevin's barberry is subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-63 of Section 6.3.2 and the Criteria Area Species Survey Area Figure 6-2 on page 6-64).

Vail Lake ceanothus has a highly restricted distribution within the Plan Area. It is found on metavolcanic or gabbroic soils on north facing slopes in chamise chaparral in the Vail Lake area and Agua Tibia Wilderness. Implementation of the Plan will result in the loss of 3,350 acres of potential habitat for this species (page P-449, Volume II: Section B Species Accounts). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 13,290 acres of suitable habitat; 2) include within the Conservation Area at least three core locations; and, 3) conduct surveys as part of the project review process for public and private projects. Vail Lake ceanothus is subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-63 of Section 6.3.2 and the Criteria Area Species Survey Area Figure 6-2 on page 6-64).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 3 High Elevation species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.15 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 3 Vernal Pool/Aquatic species: Riverside fairy shrimp (*Streptocephalus woottoni*); vernal pool fairy shrimp (*Branchinecta lynchi*); California orcutt grass (*Orcuttia californica*); Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*); Davidson's saltscale (*Atriplex serenana var. davidsonii*); little mousetail (*Myosurus minimus* ssp. *apus*); Parish's brittlescale (*Atriplex parishii*); prostrate navarretia (*Navarretia prostrata*); San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*); smooth tarplant; (*Centromadia pungens*); spreading navarretia (*Navarretia fossalis*); and thread-leaved brodiaea (*Brodiaea filifolia*).

Finding 3.5.15 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 3 Vernal Pool/Aquatic species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.15:

Riverside fairy shrimp and vernal pool fairy shrimp are narrowly distributed in the Plan Area. The Plan states that both species require specific conditions, occur in few locations and use a well defined habitat that is narrowly distributed. Primary locations include the Santa Rosa Plateau and Skunk Hollow. Implementation of the Plan will result in the loss of suitable habitat for these species: Riverside fairy shrimp, 5,868 acres; and, vernal pool fairy shrimp, 67 acres of potential vernal pool and playa habitat and 4,016 acres of specific soils (pages C-5 and C-22, Volume II: Section B Species Accounts). Each has three biological conditions which will ensure that impacts to these species are mitigated to below a level of significance. The first two biological objectives for Riverside fairy shrimp are to include within the Conservation Area five Core Areas of occupied vernal pools and their watersheds and 11,942 acres of landscape habitat which might contain suitable vernal pool habitat. The first three objectives for vernal pool fairy shrimp are: 1) to include within the Conservation Area 476 acres of suitable habitat; 2) include within the Conservation Area 2,647 acres of alkali playa at specified locations (page C-19); and, 3) include within the Conservation Area at least three Core Areas that include the three known occupied vernal pools and their watersheds (page C-19). The final objective for each species is identical: include within the Conservation Area additional locations identified through the implementation of the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools policy (Section 6.1.2 of the MSHCP).

California Orcutt grass, Coulter's goldfields, Davidson's saltscale, little mousetail, Parish's brittlescale, San Jacinto Valley Crownscale, spreading navarretia and thread-leaved brodiaea all have limited geographic distribution, specialized habitat requirements and management requirements for floodplain processes. California Orcutt grass is restricted to vernal pools at the Santa Rosa Plateau, Skunk Hollow and Salt Creek. Coulter's goldfields, Davidson's saltscale, Parish's brittlescale, San Jacinto Valley crownscale and spreading navarretia are found in the alkali floodplains of the San Jacinto River, Mystic Lake and Salt Creek. Little mousetail is found in Salt Creek, the Santa Rosa Plateau and Harford Springs County Park. Thread-leaved brodiaea is found along the San Jacinto River, on Salt Creek and the Santa Rosa Plateau.

Implementation of the Plan will result in the loss of habitat for these species: California Orcutt grass, 1,130 acres; Coulter's goldfields, Davidson's saltscale, little mousetail, Parish's brittlescale, San Jacinto Valley crownscale, spreading navarretia, and thread-leaved brodiaea, 1,370 acres (pages P-45, P-74, P-91, P-170, P-264, P-354, P-421, and P-441, Volume II: Section B Species Accounts and pages 4.1-76, 4.1-68, 4.1-79, and 4.1-67, Volume IV: EIR/EIS and Addendum).

Their respective biological objectives will ensure that impacts to these species are mitigated to below a level of significance. The first two objectives for California Orcutt grass are: include within the Conservation Area 6,680 acres of suitable habitat and at least three (3) of the known locations of this species at specified locations (page P-42). The first objective for Coulter's goldfields, Davidson's saltscale, little mousetail, Parish's brittlescale, San Jacinto Valley crownscale, spreading navarretia and thread-leaved brodiaea are the same: include within the Conservation Area 6,900 acres of suitable habitat at the San Jacinto River, Mystic Lake and Salt Creek. The second objective for California Orcutt grass is to include within the Conservation Area at least three (3) of the known locations of this species at specified areas (page P-42). The second objective for Coulter's goldfields is to include within the Conservation Area at least 20 of the known occurrences of this species and the three (3) known Core Areas (page P-71). The second objective for Davidson's saltscale is to include within the Conservation Area the three known localities (page P-88). The second objective for little mousetail is: to include within the Conservation Area at least five (5) of the known locations of this species (Page P-167). The second objective for Parish's brittlescale is to include within the Conservation Area the three known populations of this species in the upper Salt Creek drainage (page P-261). The second objective for San Jacinto Valley crownscale is to include within the Conservation Area the Alberhill Creek locality and the three (3) Core Areas (page P-351). The second objective for spreading navarretia is to include within the Conservation Area at least 13 of the known localities of this species (page P-418). The second objective for thread-leaved brodiaea is to include within the Conservation Area the specified Core Areas (page P-436).

Objective three for all these species are identical: conduct surveys as part of the project review process for public and private projects within the Criteria Area Species Survey Area map (Figure 6-2 on page 6-64 of the MSHCP).

Objective four for California Orcutt grass is to include within the Conservation Area the watershed of specified vernal pool complexes in order to maintain hydrology. Objective four for Coulter's goldfields, Davidson's saltscale, little mousetail, Parish's brittlescale, San Jacinto Valley crownscale, spreading navarretia and thread-leaved brodiaea is to include within the Conservation Area the floodplain along the San Jacinto River and maintain floodplain processes (pages P-71, P-88, P-167, P-261, P-351, P-418, and P-436).

Objective five for Coulter's goldfields, Davidson's saltscale, little mousetail, Parish's brittlescale, San Jacinto Valley crownscale, spreading navarretia, and thread-leaved brodiaea is to include within the Conservation Area the floodplain along Salt Creek in its existing condition between Warren Road and Newport Road and the vernal pools in Upper Salt Creek (page P-72, P-89, P-167, P-261, P-352, P-419, P-437).

In addition, these species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.). California Orcutt grass and spreading navarretia are subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan) within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). Coulter's goldfields,

little mousetail, Davidson's saltscale, Parish's brittlescale, San Jacinto Valley crownscale and thread-leaved brodiaea are subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-63 of Section 6.3.2 and the Criteria Area Species Survey Area Figure 6-2 on page 6-64).

Smooth tarplant has a limited geographic distribution, specialized habitat requirements and management requirements for floodplain processes. Distribution is scattered throughout the Plan Area but is primarily restricted to the San Jacinto River, Mystic Lake and Salt Creek. Implementation of the Plan will result in the loss of 1,370 acres of habitat for this species (page P-412, Volume II: Section B Species Accounts and page 4.1-74, Volume IV: EIR/EIS and Addendum). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area at least 6,900 acres of suitable habitat; 2) include within the Conservation Area the 27 known occurrences; and, 3) conduct surveys as part of the project review process for public and private projects within the Criteria Area Species Survey Area, Figure 6-2 on page 6-64 of the MSHCP. This species is subject to the Additional Needs and Procedures of the MSHCP (Sections 6.1.3, 6.3.2 and 9.2(2)(9)) and additional locations of this species shall be conserved in accordance with Section 6.3.2 of the MSHCP. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 3 Vernal Pool/Aquatic species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS and Addendum Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2; Section B Species Accounts).

The MSHCP used specific "models" for Riverside fairy shrimp and vernal pool fairy shrimp California Orcutt grass, Coulter's goldfields, Davidson's saltscale, little mousetail, Parish's brittlescale, spreading navarretia, thread-leaved brodiaea, San Jacinto Valley Crownscale, smooth tar plant and did not consolidate or generalize factors such as clayey soils, alkali soils and Santa Rosa Plateau basalt flows. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because the analyses in both the MSHCP/NCCP and the Biological Opinion assumed similar levels of conservation of the factors considered in the models including clayey soils, alkali soils and Santa Rosa Plateau basalt flows.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Prostrate navarretia is limited in geographic distribution, specialized habitat requirements and requirements for hydrology. It is found in coastal sage scrub, valley and foothill grassland and vernal pools on the Santa Rosa Plateau only. No known populations of this species are outside the Conservation Area. Suitable habitat for this species exists outside the Conservation Area, however, it cannot be quantified (page P-303, Volume II: Section B Species Accounts and page 4.1-80, Volume IV: EIR/EIS and Addendum). There are three biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area the known occurrences; 2) include within the Conservation Area the watershed of the vernal pool complex; and, 3) conduct surveys as part of the project review process for public and private projects within the Criteria Area Species Survey Area, Figure 6-2 on page 6-64 of the MSHCP. This species is subject to the Additional Needs and Procedures of the MSHCP (Sections 6.1.3, 6.3.2 and 9.2(2)(9)) and additional locations of this species shall be conserved in accordance with Section 6.3.2 of the MSHCP. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

The MSHCP used specific "models" for prostrate navarretia and did not consolidate or generalize factors such as clayey soils, alkali soils and Santa Rosa Plateau basalt flows. This generalized model was refined for prostrate navarretia that is known only from the Santa Rosa Plateau by limiting the model to the Santa Ana Mountains bioregion. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because the analyses in both the MSHCP/NCCP and the Biological Opinion assumed similar levels of conservation of the factors considered in the models including clayey soils, alkali soils and Santa Rosa Plateau basalt flows.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Impact 3.5.16 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 3 Riparian/Aquatic species: Santa Ana sucker (*Catastomus santaanae*); western pond turtle (*Clemmys marmorata pallida*); southwestern willow flycatcher (*Empidonax*

traillii extimus); western yellow-billed cuckoo (*Coccyzus americanus occidentalis*); and mud nama (*Nano stenocarpum*).

Finding 3.5.16 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 3 Riparian/Aquatic species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.16:

Santa Ana sucker is narrowly distributed in a few locations, in open water and emergent vegetation in the Santa Ana River and below Prado Dam. It has specific habitat requirements, occurs in few locations and in low densities. About 390 acres of potential habitat for this species occur outside the Criteria Area and Public/Quasi-Public lands (page F-25, Volume II: Section B Species Accounts). There are five biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 3,480 acres of suitable habitat; 2) include within the Conservation Area the Core Areas as per Page F-20, Volume II: Section B Species Accounts; 3) include within the Conservation Area the natural river bottom and banks of the Santa Ana River; 4) Reserve Managers will assess barriers to sucker movement and connectivity requirements; and, 5) Reserve Managers will assess threats to Santa Ana sucker, identify spawning areas, and other measures to benefit the species (page F-20). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP).

The acreages reflect different flooding conditions/assumptions in the Prado Basin area in the MSHCP/NCCP and Biological Opinion analyses. The MSHCP/NCCP assumed a "normal" rainfall year in this area while the Biological Opinion assumed flooding of the 100-year floodplain in Prado Basin. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analysis in either the MSHCP/NCCP or the Biological Opinion because essentially the entire Prado Basin is within public ownership and is assumed to be included in the MSHCP Conservation Area.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Western pond turtle has narrow habitat requirements and a limited distribution within the Plan Area, where it is restricted to slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs and other water bodies where abundant cover is available. Implementation of the Plan will result in the loss of approximately 5,331 acres of suitable wetland habitat and 34,068 acres of adjacent upland habitat (page R-132, Volume II: Section B Species Accounts

and page 4.1-34, Volume IV: EIR/EIS). There are five biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 18,289 acres of suitable primary pond habitat; 2) include within the Conservation Area at least eight (8) Core Areas (see Page R-128); 3) include within the Conservation Area 59,999 acres of upland habitat; 4) include within the Conservation Area dispersal habitat in specified areas (Page R-128); and 5) maintain continued use of 75% of the conserved Core Areas as measured once every three years. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

Southwestern willow flycatcher is narrowly distributed in a few locations, primarily in riparian woodland and other forests. It will require Conservation on a landscape level, with site-specific considerations for known locations and species-specific management conditions. Implementation of the Plan will result in the loss of 3,220 acres of suitable habitat for this species (page B-480, Volume II: Section B Species Accounts). There are four biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 10,580 acres of suitable habitat, as specified on page B-474; 2) include within the Conservation Area at least six (6) Core Areas and connecting Linkages as specified on page B-474; 3) include within the Conservation Area additional areas within the Criteria Area identified as important for this species; and, 4) maintain (once every 3 years) the continued use of and successful reproduction of 75% of the known occupied Core Areas (page B-475). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

Western yellow-billed cuckoo has been documented in the Plan Area but has only one known breeding location. It is found in riparian scrub and forest in the lowland bioregions. It requires specific conditions, occurs in low densities, requires site-specific considerations for known locations, species-specific management measures and will require Conservation on a landscape level. Implementation of the Plan will result in the loss of approximately 2,580 acres of suitable habitat for this species (page B-562, Volume II: Section B Species Accounts). There are five biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (pages B-555 and B-556): 1) include within the Conservation Area 8,970 acres of suitable habitat; 2) include within the Conservation Area five Core Areas and connecting Linkages, as specified; 3) maintain or improve the riparian habitat within documented locations of this species at Prado Basin, Santa Ana River, North Peak Conservation Bank; 4) include within the Conservation Area areas identified as important to this species; and, 5) maintain (once every three (3) years) the continued use of and successful reproduction at 75% of the known occupied Core Areas. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

When identifying suitable habitat, the MSHCP/NCCP analysis included isolated water bodies in the analysis due to previous observations of transient individuals in these area. The Biological Opinion did not consider these areas to be suitable habitat. These minor differences did not result in a substantial difference in the amount of habitat to be conserved in the area. Moreover, these different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analysis in either the MSHCP/NCCP or the Biological Opinion because the isolated water bodies are within public ownership and assumed to be included in the MSHCP Conservation Area.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Mud nama is a plant which is limited in geographic distribution and has specialized habitat requirements and management requirements for hydrology. It occurs within muddy embankments of marshes and swamps, lake margins and riverbanks. There are three known occurrences in the Plan Area. Implementation of the Plan will result in the loss of approximately 1,220 acres of habitat for this species (page P-203, Volume II: Section B Species Accounts and page 4.1-80, Volume IV: EIR/EIS). There are four biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-201): 1) include within the Conservation Area at least 7,050 acres of suitable habitat in the Riverside Lowlands Bioregion; 2) include within the Conservation Area two of the three (3) known occurrences; 3) conduct surveys for this species as part of the project review process for public and private projects; and, 4) include within the Conservation Area the floodplain along the San Jacinto River. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.). Mud nama is also subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-63 of Section 6.3.2 and the Criteria Area Species Survey Area Figure 6-2 on page 6-64).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 3 Riparian/Aquatic species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.17 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on this Group 3 Wetland/Marsh/Lake species: tri-colored blackbird (*Agelaius tricolor*).

Finding 3.5.17 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on this Group 3 Wetland/Marsh/Lake species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.17:

Tri-colored blackbird has a widely scattered distribution in patches of dense emergent vegetation and riparian woodland areas in the lowland and foothills. It occurs in few locations, is narrowly distributed in its primary habitat and requires site-specific considerations, protection of preferred habitat on a landscape basis, and species-specific conservation measures. Implementation of the Plan will result in the loss of 60 acres of primary habitat, and 193,180 acres of secondary habitat (page B-527, Volume II: Section B Species Accounts and page 4.1-40, Volume IV: EIR/EIS). There are six biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 420 acres of suitable primary habitat; 2) include within the Conservation Area the five (5) Core Areas (page B-522); 3) include within the Conservation Area 66,510 acres of secondary habitat; 4) maintain (once every 5 years) the continued use of and successful reproduction within at least one (1) of the identified Core Areas; 5) maintain, preserve and if feasible, restore hydrological process at specified areas; and, 6) include within the Conservation Area a 100-meter buffer around known nesting locations. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

The Department finds that issuance of the MSHCP permit could result in significant impacts on this Group 3 Wetland/Marsh/Lake species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on this species and its habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to this species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.18 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 3 Grassland species: burrowing owl (*Athene cunicularia hypugaea*); mountain plover (*Charadrius montanus*); northern harrier (*Circus cyaneus*); turkey vulture (*Cathartes aura*); Los Angeles pocket mouse (*Perognathus longimemris brevinasus*); round-leaved filaree (*Erodium macrophyllum*); and Yucaipa onion (*Allium marvinii*).

Finding 3.5.18 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 3 Grasslands species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.18:

Burrowing owl is narrowly distributed at few locations in grassland and some agricultural land in the Plan Area. It has specific soil and micro-habitat conditions, occurs in few locations, requires large home ranges, occurs in low numbers and is semi-colonial. Implementation of the Plan will result in the loss of 82,490 acres of potential primary habitat and 101,400 acres of secondary potential habitat (page B-70, Volume II: Section B Species Accounts and page 4.1-43, Volume IV: EIR/EIS). There are seven (7) biological objectives which will ensure that impacts to this species are mitigated to below a level of significance : 1) include within the Conservation Area 27,470 acres of suitable primary habitat; 2) include within the Conservation Area the five (5) Core Areas (page B-64); 3) include within the Conservation Area 22,120 acres of secondary habitat; 4) include within the Conservation Area the known nesting locations at specified areas; 5) conduct surveys for this species as part of the project review process for public and private projects (see page B-65); 6) conduct pre-construction presence/absence surveys in suitable habitat for this species for all covered activities in the life of the Permit; and, 7) create translocation sites in the Conservation Area for the establishment of new colonies of burrowing owl. Burrowing owl is subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-65 of Section 6.3.2 and the Burrowing Owl Survey Areas with Criteria Area, Figure 6-4 on page 6-67 of the MSHCP). This species is also subject to the nest protection policies of the MSHCP (page 5-6 of Section 5.2.1(5) of the MSHCP).

Mountain Plover is narrowly distributed at a few locations in playas, vernal pools, grasslands and some agriculture habitats in the Riverside Lowlands Bioregion. It uses well defined habitat, requires site-specific considerations, protection of preferred habitat and species-specific management conditions. Implementation of the Plan will result in the loss of 1,160 acres of potential wintering habitat (page B-333, Volume II: Section B Species Accounts). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page B-330): 1) include within the Conservation Area 6,710 acres of suitable habitat; 2) include within the Conservation Area at least four (4) Core Areas and connecting Linkages, as specified. This species will benefit from the Riparian/Riverine Areas and Vernal

Pool policies of the MSHCP and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP).

Northern harrier has a widely scattered distribution in breeding habitat (cismontane alkali marsh, freshwater marsh, playas and vernal pools) sand foraging and wintering habitat (agricultural land, Riversidean alluvial fan sage scrub and coastal sage scrub) in the lowland and foothills bioregions. Implementation of the Plan will result in the loss of 284,860 acres of potential habitat (page B-387, Volume II: Section B Species Accounts and page 4.1-46, Volume IV: EIR/EIS). There are five biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 50,020 acres of suitable primary breeding and foraging habitat; 2) include within the Conservation Area the known and historic breeding locations at specified locations (page B-382); 3) include within the Conservation Area 104,140 acres of secondary habitat; 4) include and buffer the known nesting locations; and, 5) maintain (once every 5 years) the continued use of and successful reproduction at 75% of the known nesting areas. This species will benefit from the Riparian/Riverine Areas and Vernal Pool policies (Sections 9.2(2)(7) and 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS), Best Management Practices (Section 9.2(2)(4) of the MSHCP), and the nest protection policy (page 5-6 of Section 5.2.1(5) of the MSHCP).

Turkey vulture is widely distributed throughout the Plan Area. It requires specific conditions for nesting locations, site-specific considerations and species-specific considerations and management requirements. Implementation of the Plan will result in the loss of an estimated 342,360 acres of potential habitat for this species (page B-544, Volume II: Section B Species Accounts and page 4.1-46, Volume IV: EIR/EIS). There are five (5) biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 457,160 acres of suitable foraging habitat; 2) include within the Conservation Area locations where the turkey vulture has been observed and that may function as important foraging areas; 3) include within the Conservation Area and buffer the known nest locations; 4) maintain (once every three (3) years) the continued use of and successful reproduction at 75% of the known nesting areas; and, 5) include within the Conservation Area cliffs capable of supporting nests. This species will benefit from the nest protection policies (page 5-6 of Section 5.2.1(5) of the MSHCP).

Los Angeles pocket mouse is widely distributed in the eastern two-thirds of the Plan Area in sparsely vegetated habitat areas with patches of fine sandy soils associated with washes or dunes. Implementation of the Plan will result in the loss of an estimated 19,508 acres of potential habitat for this species (page M-91, Volume II: Section B Species Accounts and page 4.1-65, Volume IV: EIR/EIS). There are four (4) biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page M-87): 1) include within the Conservation Area 14,000 acres of suitable habitat; 2) include within the Conservation Area at least 10,000 acres of suitable habitat outside probable Core Areas; 3) conduct surveys as part of the project review process for public and private projects within the Mammal Species Survey Areas (Figure 6-5, page 6-68, Volume I: Part 2 of 2); and, 4) within the Conservation Area demonstrate that seven (7) Core Areas supports a stable or increasing population occupying at least 30% of the suitable habitat measured over any 8-consecutive year period. Los Angeles

pocket mouse will benefit from the Additional Survey Needs and Procedures policies of the MSHCP (page 6-65 of Section 6.3.2).

Round-leaved filaree has specialized habitat and soils requirements and a limited distribution within the Plan Area. It is found in open cismontane woodland and valley and foothill grassland on clay soils between the Gavilan Hills to the foothills of the Agua Tibia Mountains. Implementation of the Plan will result in the loss of 215,108 acres of potential habitat (page P-323, Volume II: Section B Species Accounts and page 4.1-73, Volume IV: EIR/EIS). There are three (3) biological objectives which will ensure that impacts to this species are mitigated to below a level of significance (page P-321): 1) include within the Conservation Area 37,663 acres of suitable habitat; 2) include within the Conservation Area eight (8) of the ten (10) known localities of this species; and 3) conduct surveys for this species as part of the project review process for public and private projects. Round-leaved filaree will benefit from the Additional Survey Needs and Procedures policies of the MSHCP (page 6-63 of Section 6.3.2 and the Criteria Area Species Survey Area Figure 6-2 on page 6-64).

Yucaipa Onion has specialized habitat requirements and an unknown distribution in the Plan Area. It is found on clay openings in chaparral habitat at elevations between 760 and 1065 meters. Implementation of the Plan will result in the loss of an estimated 2,460 acres of potential habitat (page P-471, Volume II: Section B Species Accounts and page 4.1-66, Volume IV: EIR/EIS and Addendum). There are two biological objectives which will ensure that impacts to this species are mitigated to below a level of significance: 1) include within the Conservation Area 1,200 acres of suitable habitat; and, 2) conduct surveys as part of the project review process for public and private projects within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). This plant is subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan). This species is also subject to the Additional Needs and Procedures of the MSHCP (Sections 6.1.3, 6.3.2 and 9.2(2)(9) and additional locations of this species shall be conserved in accordance with Section 6.3.2 of the MSHCP.

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for Yucaipa onion. Some of these differences are related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat and elevation restrictions placed on the definitions. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 3 Grassland species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject

(see Final EIR/EIS Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6 and Addendum). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.19 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Group 3 Different Sampling Strategy species: Santa Rosa plateau fairy shrimp (*Linderiella santarosae*); Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*); Quino checkerspot butterfly (*Euphydryas editha quino*); Aguanga kangaroo rat (*Dipodomys merriami collinus*); San Bernardino kangaroo rat (*Dipodomys merriami parvus*); Munz's onion (*Allium munzii*); Orcutt's brodiaea (*Brodiaea orcuttii*); Parish's meadowfoam (*Limnanthes gracilis* var. *parishii*); San Diego Ambrosia (*Ambrosia pumila*); Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum)* ; slender-horned spineflower (*Dodecahema leptoceras*); Wright's trichocoronis, (*Trichocoronis wrightii* var. *wrightii*); and San Diego button celery (*Eryngium aristulatum* var. *parishii*).

Finding 3.5.19 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts of the MSHCP on these Group 3 Different Sampling Strategy species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.19:

Santa Rosa Plateau fairy shrimp, Parish's meadowfoam and San Diego button celery are all species restricted to the Santa Rosa Plateau. Santa Rosa Plateau fairy shrimp is found on vernal pools formed on southern basalt flows. Parish's meadowfoam is found on ephemeral wetlands on the Plateau. San Diego button celery is found in vernal pools on the Plateau. Implementation of the Plan would result in the loss of 252 acres of habitat for the Santa Rosa Plateau fairy shrimp, (page C-14, Volume II: Section B Species Accounts and page 4.1-32, Volume IV: EIR/EIS and Addendum). There are no known occurrences of Parish's meadowfoam or San Diego button celery outside of the conserved area on the Santa Rosa Plateau. There are three (3) biological objectives which will mitigate impacts for Santa Rosa Plateau fairy shrimp to below a level of significance: 1) include within the Plan Area at least 32 acres of basalt flow vernal pools and their watersheds; 2) include within the Conservation Area at least 2,134 acres of areas on the basalt flow; and, 3) include within the Conservation Area additional areas identified as important for this species (page C-12). Parish's meadowfoam has two biological objectives which will mitigate impacts to below a level of significance: conserving the one (1) known location on the Santa Rosa Plateau and conserving the watershed of the vernal pool complex on the Santa Rosa

Plateau. San Diego button celery has the same two conditions which will mitigate impacts to below a level of significance, except that condition number one requires conservation of the four known locations on the Santa Rosa Plateau. In addition, these species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP).

The MSHCP used specific "models" for Santa Rosa Plateau fairy shrimp and San Diego button celery and did not consolidate or generalize factors such as clayey soils, alkali soils and Santa Rosa Plateau basalt flows. This generalized model was refined for Santa Rosa Plateau fairy shrimp and San Diego button celery that are known only from the Santa Rosa Plateau by limiting the model to the Santa Ana Mountains bioregion. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because the analyses in both the MSHCP/NCCP and the Biological Opinion assumed similar levels of conservation of the factors considered in the models including clayey soils, alkali soils and Santa Rosa Plateau basalt flows.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Delhi sands flower-loving fly is found in low numbers and is narrowly distributed in Delhi series soils at three locations in the Plan Area. It requires a specific habitat type, site-specific considerations, protection and enhancement of this habitat, and species-specific management measures to maintain the habitat and populations. Implementation of the Plan will result in the loss of 452 acres of primary habitat and 791 acres of potentially restorable habitat (page I-11, Volume II: Section B Species Accounts). The Plan includes three possible scenarios for Conservation of habitat which will mitigate impacts to below a level of significance, Objective 1A, 1B and 1C (see pages I-2-6). Objective 2 requires that Reserve Managers document successful reproduction at all three Core Areas in order for the species to be conserved in accordance with Objective 1.

Quino checkerspot butterfly is narrowly distributed at a few locations within the Plan Area and are restricted by the distribution and availability of their host plants. Total modeled habitat and total conserved habitat are recorded in Exhibit 1 of the Addendum. Thirty-two percent of the 85 known occurrences for this species are outside the Conservation Area. There are four biological objectives for this species which will mitigate impacts to below a level of significance: 1) include within the potential Core Areas 67,493 acres of habitat mosaic; 2) include within the Conservation Area the 12 known satellite occurrence complexes within six (6) identified areas (page I-18); 3) maintain landscape connectivity around the Lake Mathews/Estelle Mountain/Harford Springs Core and between Core and satellite populations in the southeastern portion of the Plan; and 4) Reserve Managers will document the distribution of Quino checkerspot on an annual basis.

The Biological Opinion "model" considered recovery units and information in the final August 11, 2003 quino recovery plan. This information was not available when the MSHCP/NCCP was distributed for public review (November 2002) or approved by the County Board of Supervisors (June 2003). Moreover, these different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because anticipated conservation within the recovery units and additional occurrence data reflected in the August 11, 2003 quino recovery plan is essentially identical in the MSHCP/NCCP and the Biological Opinion.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Aguanga kangaroo rat and San Bernardino kangaroo rat both have narrow distributions in the Plan Area. Aguanga kangaroo rat has known localities in alluvial fan sage scrub in Temecula Creek in Aguanga and Wilson Creek in the Sage area. San Bernardino kangaroo rat is primarily restricted to Riversidean alluvial fan sage scrub in the San Jacinto River, Bautista Creek, Reche Canyon and the northern portion of the Jurupa Mountains. Implementation of the Plan will result in the loss of 1,324 acres of habitat for Aguanga kangaroo rat and 1,785 acres of habitat for San Bernardino kangaroo rat (pages M-5 and M-155, Volume II: Section B Species Accounts and page 4.1-61, Volume IV: EIR/EIS). Each species has four biological objectives which will mitigate impacts to these species to below a level of significance: 1) include within the Conservation Area 5,484 acres of habitat for the Aguanga kangaroo rat and 4,440 acres of habitat for the San Bernardino kangaroo rat; 2) conduct surveys for this species as part of the project review process for public and private projects; 3) within the 5,484 acres of occupied and potential habitat for the Aguanga kangaroo rat and 4,400 acres for the San Bernardino kangaroo rat, ensure that 75% of the total is occupied and 20 percent of the occupied habitat supports a medium or higher population density; and, 4) Reserve Managers shall maintain or restore ecological process within the historic floodplains of the riparian stretches for the respective species. These species will benefit from the Riparian/Riverine and Vernal Pool Policy of the MSHCP, Best Management Practices and control of exotic species. Aguanga kangaroo rat and San Bernardino kangaroo rat are subject to the Additional Survey Needs and Procedures policies of the MSHCP (page 6-65 of Section 6.3.2 and the Mammal Species Survey Areas with Criteria Area, Figure 6-5 on page 6-68 of the MSHCP).

The MSHCP/NCCP analysis focused on occupied habitat as defined through extensive work on this species conducted throughout the MSHCP/NCCP Area. The Biological Opinion developed a suitable habitat "model" using vegetation and other relevant environmental factors. The analysis in the MSHCP/NCCP is therefore more reflective of known occupied habitat within the Plan Area while the analysis in the Biological Opinion predicts suitable habitat. The Biological Opinion analysis notes that suitable habitat is likely overestimated based on the model developed for the Opinion. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analysis in either the MSHCP/NCCP or the Biological

Opinion because similar levels of conservation of both known occupied areas and predicted suitable habitat are anticipated in both the MSHCP/NCCP and the Biological Opinion.

Munz's onion has a limited geographic distribution and specialized habitat requirements. It is associated with clay and cobbly soils of the Altamont, Auld, Bosanko, Claypit and Porterville series. Implementation of the Plan will result in the loss of 15,825 acres of potential habitat and 3,770 acres of clay soils. There are three biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area at least 21,260 acres of suitable habitat; 2) include within the Conservation Area 13 localities of this species (see page P-214); and 3) conduct surveys as part of the project review process for public and private projects within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). This plant is subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan).

Orcutt's brodiaea has a limited geographic distribution and specialized habitat requirements and management requirements for hydrology. It is restricted to ephemeral wetlands on the Santa Rosa Plateau, San Mateo Wilderness Area and along the San Jacinto River. Quantification of take of habitat was not calculated for this species, however, the Plan states that recorded locations are located outside the Conservation Area (page P-241, Volume II: Section B Species Accounts and page 4.1-68, Volume IV: EIR/EIS and Addendum). There are two biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area the known occurrences of this species (page P-240); and, 2) include within the Conservation Area the watershed for the vernal pool complexes at the Santa Rosa Plateau, San Mateo Wilderness and San Jacinto River. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP.).

The MSHCP used specific "models" for Orcutt's brodiaea and did not consolidate or generalize factors such as clayey soils, alkali soils and Santa Rosa Plateau basalt flows. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because the analyses in both the MSHCP/NCCP and the Biological Opinion assumed similar levels of conservation of the factors considered in the models including clayey soils, alkali soils and Santa Rosa Plateau basalt flows.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

San Diego ambrosia has a limited geographic distribution and specialized habitat and management requirements. There are two known populations in the Alberhill area. It occurs in open floodplain terraces or in the watershed margins of vernal pools. Implementation of the Plan

will result in the loss of 52,010 acres of potential habitat for this species (page P-229, Volume II: Section B Species Accounts). There are three biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area 21,800 acres of suitable habitat; 2) include within the Conservation Area two of the three known locations of this species; and, 3) conduct surveys as part of the project review process for public and private projects within the Narrow Endemic Plant Species survey area (see Narrow Endemic Plant Species Survey Area Map, Figure 6-1 of the Plan). This plant is subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan).

There are quantitative differences in the amount of suitable habitat between the MSHCP/NCCP and the Biological Opinion for San Diego ambrosia. Some of these differences are related to whether or not certain bioregions were assumed to be included in the definition of suitable habitat and elevation restrictions placed on the definitions. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because similar levels of Conservation are anticipated in the Riverside Lowlands bioregion in both the MSHCP/NCCP and the Biological Opinion.

Santa Ana River woollystar has a narrowly restricted geographic distribution, specialized habitat requirements and management requirements for floodplain processes. It is found in open washes and early-successional alluvial fan scrub above main watercourses whether there is periodic flooding and scouring. Implementation of the Plan will result in the loss of 910 acres of potential habitat (page P-370, Volume II: Section B Species Accounts). There are three biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area at last 2,340 acres of suitable habitat; 2) include within the Conservation Area three localities of this species near the San Bernardino County border; and, 3) include the floodplain of the Santa Ana River within the Conservation Area and maintain ecological processes. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS, and 9.2(2)(4) of the MSHCP.).

Slender-horned spineflower has specialized habitat requirements and limited distribution. It occurs in mature alluvial scrub that is maintained by periodic flooding and sediment transport at specific locations in the Plan Area (P-383). Implementation of the Plan will result in the loss of 2,950 acres of potential habitat and require surveys for 2,290 acres outside the Conservation Area (page P-388, Volume II: Section B Species Accounts). There are four biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area 8,350 acres of suitable habitat; 2) include within the Conservation Area 11 known locations of this species; 3) conduct surveys for this species as part of the project review process for public and private projects within the Narrow Endemic Plant Species Survey Area (see Narrow Endemic Plant Survey Area Map, Figure 6-1 of the Plan); and, 4) include within the Conservation Area the floodplain along Arroyo Seco Creek, Kolb Creek, Temescal Wash at Indian Creek, Bautista Creek and the San Jacinto River, and maintain ecological processes. In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS,

and 9.2(2)(4) of the MSHCP.). This plant is subject to the Protection of Narrow Endemics Policy (Sections 6.1.3 and 9.2(2)(8) of the Plan).

Wright's trichocoronis has limited geographic distribution and specialized habitat requir3ements and management requirements for floodplain process. It is restricted to the alkali floodplains of the San Jacinto River and has two core locations in the San Jacinto River and San Jacinto Wildlife Area. Implementation of the Plan will result in the loss of 1,370 acres of potential habitat (page P-464, Volume II: Section B Species Accounts and page 4.1-84, Volume IV: EIR/EIS and Addendum). There are four biological objectives which will mitigate impacts to this species to below a level of significance: 1) include within the Conservation Area 6,900 acres of suitable habitat; 2) include within the Conservation Area at least four of the known locations of this species; 3) conduct surveys for this species as part of the project review process for public and private projects within the Narrow Endemic Plant Species Survey Area (see Narrow Endemic Plant Survey Area Map, Figure 6-1 of the Plan); and, 4) include within the Conservation Area the floodplain along the San Jacinto River and maintain ecological processes. This plant is subject to the Protection of Narrow Endemics Policy of the MSHCP (Sections 6.1.3 and 9.2(2)(8) of the Plan). In addition, this species will benefit from the Riparian/Riverine Areas and Vernal Pool policies and Best Management Practices of the MSHCP (Sections 9.2(2)(7), 6.1.2 of the MSHCP and 4.1-85 of the EIR/EIS and Addendum, and 9.2(2)(4) of the MSHCP).

The Department finds that issuance of the MSHCP permit could result in significant impacts on these Group 3 Different Sampling Strategy species and their habitat from development and other covered activities contemplated by the Plan. Likewise, the Department finds that all impacts on these species and their habitat associated with the Department's issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. In so doing, the Department's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (see Final EIR/EIS and Addendum Sections 4.1, Table 4C, page 4.1-97, page 4.1-145, and Section 4.1.6). The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

The MSHCP used specific "models" for Wright's trichocoronis and did not consolidate or generalize factors such as clayey soils, alkali soils and Santa Rosa Plateau basalt flows. These different assumptions resulted in different quantitative information but do not alter the conclusions of the effects analyses in either the MSHCP/NCCP or the Biological Opinion because the analyses in both the MSHCP/NCCP and the Biological Opinion assumed similar levels of conservation of the factors considered in the models including clayey soils, alkali soils and Santa Rosa Plateau basalt flows.

As stated in the Addendum the differences in quantitative information in the MSHCP/NCCP and the Biological Opinion do not reflect substantial new information or analysis and do not result in different conclusions regarding the overall MSHCP Conservation Area to be assembled through

application of the MSHCP Criteria, the anticipated protection and management of Covered Species, or the severity of effects to Covered Species.

Impact 3.5.20 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Non-Covered Species.

Finding 3.5.20 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts on Non-Covered Species to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.20:

The County of Riverside Board of Supervisors found on June 17, 2003 in its "Certification of Environmental Impact Report, Approval of Multiple Species Habitat Conservation Plan, and Implementing Agreement – Adoption of Resolution 2003-299" that implementation of the MSHCP could cause potentially significant adverse effects on Non-Covered Species.

As a responsible agency under CEQA, CDFG is required not to approve or carry out any project for which an EIR has been certified which identifies one or more significant effects thereof unless CDFG makes one of three findings. In this instance, CDFG finds that changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects of the MSHCP on Non-Covered Species. The previous sections include specific policies and implementation measures in the Plan which mitigate and minimize impacts of the MSHCP on species. The avoidance, mitigation, monitoring and management measures discussed in those sections are hereby incorporated by reference into this section.

The discussion of Covered and Non-Covered Species goes to the heart of the rationale underlying the preparation of an NCCP. The premise is that if an NCCP protects and conserves ecosystems and ecosystem processes in a viable manner, it will protect and conserve the species which are dependent upon that ecosystem(s).

The MSHCP EIR/EIS discusses Non-Covered Species (EIR/EIS p 4.1-86) and lists all 255 species for which adequate information is available to conduct an impact analysis under CEQA and NEPA. Of these 255 species, 109 were not included as Covered Species. Table 4D of the EIR/EIS explains why these 109 species were not considered for coverage under the MSHCP. Among the rationale for non-coverage are: insufficient information on distribution; widespread distribution and not a sensitive species; lack of information on the species' ecology; and, the species is not known to occur within the Plan Area. Information on the species' ecology includes habitat requirements, life history and other factors.

The final list of 146 Covered Species includes listed threatened and endangered species, other regionally or locally sensitive or rare species, and upper trophic or generalist species that have

broad habitat requirements. The purpose of the list of 146 species is to include plants and animals which are now sensitive or have the potential to become sensitive in the future. The final species list includes a total of 32 listed and proposed to be listed species which occur in the Plan Area. Seven other strong candidates for listing are also included in the final species list.

On page 4.1-87, the MSHCP EIR/EIS states that while there is an assumption that Non-Covered Species would benefit from implementation of the MSHCP, "…it is not possible to quantify the level of conservation because of the lack of information available for these species or because the species are not known to occur within the MSHCP Area." Therefore, because there is not enough information on the species' ecology, species distribution or because a particular species is not known to occur within the Plan Area, the EIR/EIS concluded that impacts to Non-Covered Species are not quantifiable and cannot be considered in a take analysis.

The MSHCP is the largest and most comprehensive NCCP/HCP to date and covers diverse landscapes from urban cities to undeveloped foothills and montane forests, as well as 146 species of plants and animals. In addition to the presence of multiple habitats, the Plan stretches across the San Ana Mountains, Riverside Lowlands, San Jacinto Foothills, San Jacinto Mountains, Agua Tibia Mountains, Desert Transition and San Bernardino Mountains bioregions.

The principles of NCCPA and of conservation biology, creation of the Reserve in accordance with these principles, and measures to protect and maintain the habitat and conserve Covered Species will also provide for the long term conservation of Non-Covered Species dependent upon the habitat.

As is stated in Chapter 10, Section 2801(i) of the Fish and Game Code, the purpose of natural community conservation planning is to: "…sustain and restore those species and their habitat identified by the department that are necessary to maintain the continued viability of those biological communities impacted by human changes to the landscape."

The Natural Community Conservation Planning General Process Guidelines discuss the characteristics of an NCCP and state the following regarding ecosystem conservation: "The plan promotes wildlife diversity through conservation of habitat on an ecosystem level. "Wildlife" means and includes all wild animals, birds, plants, fish, amphibians, and related ecological communities, including the habitat upon which the wildlife depends for its continued viability (Fish and Game Code 711.2)." As part of its mandate, the CDFG is a trustee agency for fish and wildlife resources, not just sensitive fish and wildlife resources.

Section 3.1.4 of the MSHCP discusses these tenets of conservation biology. These tenets are the foundation for the MSHCP design and implementation and are found in the NCCP Conservation Guidelines: conserve target species throughout the planning area; larger reserves are better; keep reserve areas close; keep habitat contiguous; link reserves with corridors; reserves should be diverse; and, protect reserves from encroachment. Early in the MSHCP process a Conceptual Conservation Scenario was developed based upon the existing data and literature, habitat assessment workshops, species occurrence information, coastal sage scrub habitat quality modeling, existing and planned land uses, and general conservation biology principles from the

NCCP reserve design tenets. The Conceptual Conservation Scenario incorporated existing core reserves, potential core areas and landscape linkages and corridors connecting core areas. The potential Core areas included those areas where there are multiple species and habitat resources.

Throughout the document, the Department makes findings that the Plan complies with CEQA, the NCCPA and the Natural Community Conservation Plan Permit for the MSHCP. These findings are 4.1.2, 4.1.3, 4.1.4, 4.1.5(A-E), 4.1.6, 4.1.7, 4.1.8, 4.1.9 and 4.1.11.

CDFG finds that the Plan is consistent with the Planning Agreement (4.1.2); provides for protection of habitat, natural communities and species diversity on a landscape or ecosystem level (4.1.4); conserves, restores and manages representative natural and seminatural landscapes to maintain the ecological integrity of large habitat blocks (4.1.5A); provides linkages between Core areas and habitat outside the Plan Area (4.1.5B); provides habitat areas large enough to support sustainable populations of Covered Species (4.1.5C); incorporates a range of environmental gradients and high habitat diversity (4.1.5D); provides and sustains the movement and interchange of organisms between Core Areas (4.1.5E); identifies activities that are not compatible with conservation (4.1.6); provides conservation measures based upon the best available scientific information (4.1.7); provides a comprehensive management and monitoring program (4.1.8); provides an adaptive management program (4.1.9); and provides funding mechanisms to carry out the conservation actions (4.1.11).

The above Findings indicate that the MSHCP is designed for multiple species and that it provides for the conservation of a diverse range of species and habitats in Western Riverside County. The monitoring program will provide data on the health of habitat and a range of species (plants, plant communities, birds, reptiles, amphibians and mammals). The monitoring program will also provide information on Non-Covered Species that may be incorporated into the management plans. By identifying and conserving large blocks of interconnected natural habitat and identifying measures to conserve and protect the species dependent upon these natural habitats, the MSHCP will conserve not only the Covered Species but also all other Non-Covered Species found in and dependent upon these conserved habitats. By providing a wide range of habitat diversity, the MSHCP adequately includes in the reserve system an accompanying diverse number of Covered and Non-Covered Species.

The Department finds that issuance of the MSHCP permit could result in significant impacts on Non-Covered Species. However, the Department finds that all impacts on these species and their habitat associated with the Department's approval of the Plan and issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. The Department's findings are based on the overall conservation strategy, species-specific minimization and avoidance measures, monitoring and management program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

Impact 3.5.21 Approval of the MSHCP authorized under the NCCP Permit could result in potentially significant adverse impacts to Native Grassland Vegetation Communities.

Finding 3.5.21 The Department finds that changes or alterations have been required in or incorporated into the MSHCP and CDFG's NCCP Permit which mitigate or avoid the potential significant impacts to Native Grassland Vegetation Communities to below a level of significance. **(Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.21:

The County of Riverside Board of Supervisors found on June 17, 2003 in its "Certification of Environmental Impact Report, Approval of Multiple Species Habitat Conservation Plan, and Implementing Agreement – Adoption of Resolution 2003-299" that implementation of the MSHCP could cause potentially significant adverse effects on Native Grassland Vegetation Communities.

As a responsible agency under CEQA, CDFG is required not to approve or carry out any project for which an EIR has been certified which identifies one or more significant effects thereof unless CDFG makes one of three findings. In this instance, CDFG finds that changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects of the MSHCP on Native Grassland Vegetation Communities. The previous sections include specific policies and implementation measures in the Plan which mitigate and minimize impacts of the MSHCP on species. The avoidance, mitigation, monitoring and management measures discussed in those sections are hereby incorporated by reference into this section.

The MSHCP vegetation coverage does not distinguish between native and non-native grassland, just that grassland could be reduced by 72%. The MSHCP EIR/EIS states on page 4.1-13: "However, as the vegetation coverage does not distinguish between native and non-native grassland, impacts to sensitive native grassland cannot be quantified independently, and significant impacts to this vegetation community may still occur."

Volume II-C, Habitat Accounts of the MSHCP contains a description of the grassland vegetation association, in particular native Valley and foothill grasslands. This account notes that grasslands cover approximately 11.8% of the Plan Area. Of the 11.8% only 0.2% or 2,736 acres of native Valley and foothill grassland are mapped in the Plan Area (Santa Rosa Plateau). The rest (11.6%) are non-native grasslands. However, there are other reports of smaller isolated locations of Valley and foothill grasslands. The Agua Tibia Wilderness area supports dense stands of foothill stipa and nodding needlegrass with a lower abundance of other native grasses. Additional unmapped Valley and foothill grasslands are reported within the southwestern portion of the Santa Ana Mountains including Elsinore Peak, Bluewater Flats, and Oak Flats. There are also reports of native grassland in the Gavilan Hills. According to Keeley, the current

distribution of Valley and foothill grasslands is limited to areas supporting deep clayey soils free from mechanical disturbance.

In an article entitled "Key Ecological Processes in Southern California Native Grasslands", Gary P. Bell writes that: "The permanent establishment of European annual grasses (*Bromus mollis*, *Hordeum geniculatum*, *Avena barbata*, etc) and forbs (most notably several species of *Erodium*) in the California lowlands has resulted in the near disappearance of native California grassland (Wright and Bailey 1982)." Additionally, Stromberg, Kephart and Sicular-Mertens in an article entitled "Restoration of Native Grasses in California Old Fields II: Cheap Tills", write that "Conversion to an exotic annual vegetation was so fast, extensive, and complete that the original extent and species composition of most native perennial grasslands is unknown" (Burcham 1957, Barry 1972, Keeley 1989, Heady et al. 1992, Holland and Keil 1995).

Because of the history of mining, agriculture and ranching in Riverside County, it is probable that, with the exception of some riparian areas and vernal pools, most of the native grassland in lowland areas has been replaced by annual grasses. Therefore, the loss of grasslands in lowland areas (79% of the total loss, as per Response to Comment G-16) would not appear to pose a significant adverse impact to native grasslands. In addition, 96% of the mapped known native grasslands would be conserved under the MSHCP. Grassland that occurs in a mosaic with other habitats will also be conserved throughout the Lake Skinner/Lake Mathews linkage and within Proposed Core 7 in the Vail Lake/Wilson Valley/Sage Aguanga area. Additional grassland conservation will occur within the Cactus Valley areas. It is expected that new patches of native grasslands will be found in the expanded and proposed Core Reserves where habitat is relatively undisturbed and intact.

The habitat account of grasslands in the MSHCP (Volume II-C, Habitat Accounts) recommends ground-truthing of areas supporting grasslands and clay or deep, well developed soils to determine the location of other important stands of Valley and foothill grasslands. As part of its Management and Monitoring Program the MSHCP will focus on vegetation communities that are considered underrepresented and/or most at risk in the Conservation Area (page 5-56, Section 5.0 Management and Monitoring), including native grasslands. Also on page 5-56, grassland is a vegetation category that is specifically indicated to be inventoried and assessed first.

The MSHCP will preserve the only mapped occurrence of native grassland in the Plan Area, the 2,736 acres on the Santa Rosa Plateau. The MSHCP has also identified other potential areas of native grassland. The lack of information on the location of other native grassland localities will be mitigated by the policies in the Management and Monitoring Program to identify and conserve areas of native grassland.

The Department finds that issuance of the MSHCP permit could result in significant impacts on native grasslands. However, the Department finds that all impacts native Valley and foothill grasslands associated with the Department's approval of the Plan and issuance of the Permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the Western Riverside MSHCP. The Department's findings are based on the

overall conservation strategy, species-specific minimization and avoidance measures, Monitoring and Management Program, and species-specific biological objectives, minimization and avoidance measures (MSHCP Sections 5.0, 6.1.2, 6.1.3, 6.1.4, 6.4, 7.0, 9.0 and Volume 2: Section B Species Accounts).

3.6 Mitigation Monitoring and Reporting Program

Every agency that makes CEQA findings must adopt a Mitigation Monitoring and Reporting Program (MMRP) to ensure mitigation measures that have been required as conditions of approval are carried out. (CEQA Guidelines, § 15097, subd. (d).) The County has prepared the Plan so that it incorporates monitoring and reporting requirements, and did not prepare a separate MMRP document. Those provisions in the Plan (see Section 5 of the Plan) serve the needs of both the County and CDFG to ensure that the Plan, especially the components of the plan designed to avoid and mitigate potentially significant impacts, are properly implemented in compliance with their conditions of approval. After reviewing the County's MSHCP and determining that this document meets CDFG's needs with respect to implementation of the Plan, CDFG is adopting the monitoring and reporting elements of the MSHCP as its own MMRP.

3.7 Alternatives

Where a lead agency has determined that, even after the adoption of all feasible mitigation measures, a project as proposed will still cause one or more significant environmental effects that cannot be substantially lessened or avoided, the agency, prior to approving the project as mitigated, must first determine whether, with respect to such impacts, there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA. (See, e.g., *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 445.)

CDFG faces a similar obligation as a responsible agency under CEQA. (CEQA Guidelines, § 15096, subd. (g); see also Pub. Resources Code, § 21081; CEQA Guidelines, § 15096, subd. (h).) As noted above, however, when considering alternatives and mitigation measures, CDFG "has the responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance or approve." (*Id.*, § 15096, subd. (g)(1).) Those effects, in the present case, are limited to the environmental effects authorized by CDFG under NCCPA for the Plan. In that regard, and consistent with the CEQA Guidelines, issuance of the NCCP Permit is prohibited if there is "any feasible alternative or feasible mitigation measures within [CDFG's] powers that would substantially lessen or avoid any *significant* effect" associated with that decision. (*Id.*, § 15096, subd. (g)(2) (emphasis added).)

As demonstrated above in Section 3.5, no significant environmental effects that fall within the responsibility and jurisdiction of CDFG remain unmitigated. That is to say, all potentially significant impacts associated with CDFG's authorization of the Plan are mitigated to below a level of significance under CEQA, so no project alternatives are analyzed by CDFG. (See, e.g., *Laurel Hills Homeowners Assoc. v. City Council* (1978) 83 Cal.App.3d 515, 520-521 (in adopting findings under CEQA, agencies need not consider the feasibility of project alternatives

if they adopt mitigation measures that "substantially lessen or avoid" a project's significant adverse impacts); *Laurel Heights Improvement Assoc. v. Regents of the University of California* (1988) 47 Cal.3d 376, 400-403.)

3.8 Statement of Overriding Considerations

Because CDFG's approval of the Plan will not result in any adverse environmental impacts that remain significant and unavoidable, CDFG need not adopt a Statement of Overriding Considerations under CEQA.

4.0 FINDINGS UNDER NCCPA

All NCCPs must contain certain substantive elements identified in current or former sections of the NCCPA.

4.1 NCCPA of 2002

As described above in Section 1.1, the NCCPA was significantly revised in 2002 with enactment of Senate Bill 107 ("**S.B. 107**"). S.B. 107 "grandfathered" a number of NCCPs that were under development prior to enactment of the 2002 revisions, requiring that these plans be completed, approved and implemented pursuant to the NCCPA as it read in 2001 rather than pursuant to the revised statutes (§2830). For an NCCP that falls under one of the grandfathering provisions in Section 2830, CDFG must evaluate the adequacy of the NCCP by reference to earlier versions of the NCCPA and to the guidelines issued under those earlier statutes.

Finding 4.1.1 CDFG finds that the Plan meets all of the criteria in Section 2830, subdivision (e) for "grandfathering."

Section 2830 provides that for NCCPs meeting specific criteria, taking of identified species is not prohibited even though the NCCP does not meet all standards in S.B. 107. More specifically, this section provides that specified NCCPs that were under development prior to enactment of S.B. 107 may be evaluated and approved by CDFG and implemented pursuant to some of the legal standards that were in place prior to the 2002 amendments to the NCCPA.

Certain grandfathered plans must be in "substantial compliance" with specific standards or processes before they can be approved. For a plan to be governed by Section 2830 (e), the planning agreement must have been executed on or before January 1, 2002 and the plan must be in substantial compliance with Section 2820 (Fish & Game Code §2830(e)).

The Riverside County MSHCP Planning Agreement was executed on June 19, 1997. As discussed below, the Plan substantially complies with Section 2820.

Finding 4.1.2 CDFG finds that the Plan has been developed consistent with the process identified in the planning agreement as per Section 2820(a)(1) and Section III A (1)(a-g) of the NCCP General Process Guidelines.

The NCCP General Process Guidelines ("**Guidelines**") discuss the measures that should be included in a planning agreement for a multi-species habitat plan. NCCP General Process Guidelines III (A)(1)(a-g) and Section 2820(a)(1) require that the plan be developed consistent with the planning agreement.

The Planning Agreement for the Western Riverside County Multiple Species Habitat Conservation Plan was approved by the RCHCA Board of Directors on June 19, 1997 and signed by the Director of the California Department of Fish and Game on August 19, 1997.

The terms of the Agreement were implemented as per the roles and responsibilities assigned to the respective parties. Therefore, the Planning Agreement was entered into and is consistent with the NCCP General Process Guidelines and 2820 (a)(1).

The Planning Agreement Identified the Scope and Participating Parties:

The Planning Agreement identifies the initial parties involved in the Western Riverside MSHCP. Identified participating parties include: United States Fish and Wildlife Service, the United States Bureau of Land Management, the California Resources Agency, the California Department of Fish and Game, the Riverside County Habitat Conservation Agency, the County of Riverside, and the cities of Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside, and Temecula. The MSHCP, through the Implementing Agreement, identifies the Permittees (Section 1.0 of the IA), which may include participating parties identified in the Planning Agreement.

The Planning Agreement also defines the scope of the MSHCP in Section 2.0, in geographic terms (Section 5), time limitation (Section 4), species and habitats (Section 6) and underlying biological principles (Section 1.5). In addition to the presence of multiple habitats, the Plan stretches across the Santa Ana Mountains, Riverside Lowlands, San Jacinto Foothills, San Jacinto Mountains, Agua Tibia Mountains, Desert Transition and San Bernardino Mountains bioregions. The Plan Area extends approximately from the Orange County and San Diego County boundaries east to the Coachella Valley Plan and from the San Bernardino County line south to the San Diego County line.

Section 3.1 of the Planning Agreement states that the there must be general agreement among the parties concerning the scope, cost, funding, and time required for completion of the MSHCP. The Advisory Committee, the consultants, the County of Riverside and the Wildlife Agencies all agreed on August 9, 1999 on the scope of the MSHCP. The MSHCP is a 75-year plan for the Conservation of 13 vegetation communities and 146 species. The geographic area is western Riverside County. The MSHCP has been developed using the NCCP biological principles. Therefore, the MSHCP was developed consistent with the Planning Agreement process regarding the scope of the plan and participating parties.

The Planning Agreement Identified the Natural Communities and Species

Section 6.2 of the Planning Agreement states that the initial focus of the MSHCP process will be the identification of species and habitats to be initially covered by the MSHCP and a determination by the Wildlife Agencies of the requirements necessary to provide for the conservation, protection, and management of identified species and habitats and promotion of their recovery. Section 3.7 of the Planning Agreement states as a goal the recovery of species presently listed as threatened or endangered under CESA and/or FESA. Section 6.2 of the Planning Agreement states that the initial focus of the MSHCP planning process will be "…the identification of species and habitats to be initially covered by the MSHCP and a determination by the Service and the Department of the likely requirements necessary to provide for the conservation, protection, and management of those species and habitats and promotion of their recovery."

The MSHCP undertook a lengthy, detailed process to identify sensitive habitats and plant and animal species to include in the Plan. Early in the planning process a Conceptual Conservation Scenario was developed based upon existing data bases, prior planning efforts, habitat assessment workshops, species occurrence data, coastal sage scrub habitat quality modeling, existing and planned land uses and principles of conservation biology. Based upon this data a conceptual map of a Core Areas and Linkages was prepared (Section 3.0 of Volume I of the MSHCP). The Conceptual Conservation Scenario was further divided into conservation analysis units for purposes of determining acreage figures. Then an informal gap analysis was used to determine gaps in conservation. The gap analysis identified 153,000 acres of private land necessary for Conservation, in addition to the Public/Quasi-Public Lands. An effort was made, wherever possible, to identify the major or key populations of Covered Species and indicate them as Conservation Areas. For species where there was a dearth of information, habitat analyses were conducted to ensure that major habitat areas for these species were conserved and that inventorying would be conducted at a later date. The planning process involved consultations and participation by the Wildlife Agencies, consulting biologists and scientists with expertise on particular species in Riverside County, the compilation of existing data bases from varied sources, and several workshops with region biologists to identify areas and species for Conservation (see Section 3.1.1-3.a.10 and Section 3.2.1-3.3 of the MSHC and Finding 4.1.7 of this document).

The MSHCP identifies 13 habitat types in seven bioregions. Within these distinct 13 habitat types are a wide range of endangered and sensitive flora and fauna targeted for Conservation and management. These habitat types include: montane coniferous forest, woodlands and forest, coastal sage scrub, Riversidean alluvial fan sage scrub, desert scrub, chaparral, playas and vernal pools, grassland, riparian scrub/woodland/forest, meadows and marshes, cismontane alkali marsh, open water and agricultural land.

The end result of this process is that the MSHCP will protect Core Areas, which are a block of habitat of appropriate size, configuration, and vegetation characteristics which generally support the life history requirements of one or more Covered Species, and Linkages, which are

connections between Core Areas with adequate size, configuration and vegetation characteristics to generally provide for "live-in" habitat and/or provide for genetic flow for identified Planning Species, supporting 13 vegetation communities and 146 Covered Species (including 32 species which are listed, or proposed to be listed). The MSHCP also includes a comprehensive program of avoidance and minimization measures, management and monitoring to ensure the health of the reserve system.

Therefore, the MSHCP has been developed consistent with the Planning Agreement process to identify natural communities and species in those communities, including endangered, threatened, proposed, candidate plants and animals.

The Planning Agreement Establishes a Process for Identification of Target Species

The Planning Agreement requires that a process be established for the identification of target species which shall collectively serve as indicators of the natural communities. Section 4.1.8 of these Findings discusses the comprehensive monitoring program. The monitoring program involves an initial inventory and assessment phase, a survey and monitoring design program phase, formulation of sampling protocols, ongoing management measures and adaptive management. One of the measures in the Initial Inventory and Assessment Phase (page 5-54 of Section 5.33 of the MSHCP), has the goal of identifying species as potential indicators of system condition. The survey and monitoring strategy is designed to maximize the number of species and attributes that can be measured under a set of protocols. Once the inventory assessment is complete, the specific long-term monitoring sampling locations, methods, and survey intensity will be fully developed after analyses of the habitat and species inventories. Although target species, which can serve as indicators, may result from the comprehensive monitoring program, the MSHCP monitoring and adaptive management programs are more comprehensive and involve more measurement variables than simple selection of a target species but accomplish the goal for identifying species as potential indicators for system condition.

Therefore, the MSHCP has been developed consistent with the Planning Agreement process to identify target species which shall serve as indicators of natural communities.

The Planning Agreement Establishes a Process for the Collection of Data to Meet Scientifically Sound Principles for the Conservation of Species

Section 9 of the Planning Agreement discusses the standards for biological data. It establishes a process for the MSHCP to use the best currently available scientific information and requires that measures to fill data gaps and collect additional scientific data will be included in MSHCP implementation measures.

As part of the data collection process, the MSHCP biological consultants coordinated three separate sessions to assemble biological experts and get their input on species conservation and reserve design. The biological consultants also discussed future tasks, including creation of a habitat assessment model and the problems inherent in devising a model, including additional data collection and analysis.

Independent scientific input has been provided by the Science Review Panel, authorized by the Riverside Board of Supervisors. The Science Review Panel is headed by Dr. Michael F. Allen of the Center for Conservation Biology, University of California, Riverside. The Science Review Panel has provided written comments on substantive documents submitted to it for review. In addition, the MSHCP has adopted a scientifically-based comprehensive habitat assessment, monitoring, management and adaptive management program to provide ongoing data collection and ensure the Conservation of Covered Species and habitats. The MSHCP utilized an extensive data collection process and received input from scientific experts in the various fields of biology and conservation biology (see Finding 4.1.7 of this document).

Therefore, the Planning Agreement established a process for the collection of data to meet scientifically sound principles for the conservation of species.

The Planning Agreement Established a Process for Public Participation

Section 2.1 of the Planning Agreement establishes a cooperative process among the RCHCA, federal and state resource agencies, and affected stakeholders for the development of a successful MSHCP for Western Riverside County. Section 7 of the Planning Agreement details the roles and responsibilities of the signatories. Sections 7.1.1-7.1.5 of the Planning Agreement provide for public input throughout the MSHCP process. Section 7.1.1 advocates facilitating the preparation of the MSHCP through a participatory process to ensure ample opportunity for public input. Section 7.1.2 discusses the membership of an Advisory Committee. Section 7.1.3 requires the provision of adequate meeting times and facilities for the Advisory Committee, and Section 7.1.1 requires that ample opportunity for public comment will be provided in compliance with all applicable laws. Section 7.1.4 requires that the MSHCP be prepared based upon consideration of the recommendations of the Advisory Committee. Section 7.1.5 requires that a Scientific Advisory Committee be appointed.

The County of Riverside formally constituted an advisory committee which was composed of representatives of the development community, environmental community, private land owners, the Wildlife Agencies, the Riverside County Farm Bureau, and other governmental organizations ("**Advisory Committee**"). The Advisory Committee was established and met from 1999-2003 to review the MSHCP work products and make recommendations to the Board of Supervisors. The Advisory Committee was actively involved in the formation of MSHCP alternative plan scenarios, selection of implementation mechanisms, MSHCP land acquisition process and the incentives program. The Advisory Committee meetings were open to the public and advertised on the County's web site. The role of the Advisory Committee was to incorporate the points of view of numerous and varied organizations which have a stake in the Plan and forward recommendations to the Board of Supervisors regarding the MSHCP. The Public also had the opportunity to review and comment on Plan drafts, DEIR and Plan and FEIS. The County held numerous hearings across the County on the General Plan, Area Plans, and the MSHCP. In addition, the County established a web site for the Riverside County Integrated Plan (including the MSHCP), conducted outreach workshops, and held public hearings throughout the process. Section 6.0 of the EIR/EIS reviews the public review process. Finally, the County of Riverside

Board of Supervisors did contract with the University of California Riverside, Department of Conservation Biology to assemble a scientific review panel.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement with regard to public participation.

The Planning Agreement Established a Process for Interim Project Review

Section 10.13 of the Planning Agreement states that an interim process for the review of projects prior to MSHCP approval will be cooperatively developed and instituted by participating RCHCA jurisdictions, the Service and the Department.

An interim project review process was established by the County, and Interim Project Review Guidelines were established on April 12, 1999. The purpose of the interim project review process was threefold: 1) to provide an opportunity for dialogue between the County, project applicants and the Wildlife Agencies; 2) to allow early review and consideration of proposed projects which could preclude the successful development of the MSHCP; and 3) to ensure that Wildlife Agencies document their concerns so that mitigation options can be explored.

The County and the Wildlife Agencies established an interim project review process and met regularly to discuss development projects which had the potential to adversely impact the eventual reserve design. During these meetings the Wildlife Agencies recommended mitigation measures or project alternatives which would help achieve the preliminary MSHCP Conservation objectives.

Therefore, the Department finds that the MSHCP was developed consistent with the Planning Agreement requirement for an interim review process.

The Planning Agreement Requires that Draft Documents associated with the Plan are Available for Review and Comment 45 Days Prior to Adoption

A notice of preparation for an EIR/EIS was circulated in October 2000. A Notice of Intent was published on September 7, 2001 in the Federal Register. Two public scoping meetings were held in October and November 2001. A Notice of Availability of the Draft Environmental Impact Report/Environmental Impact Statement for the MSHCP was issued on November 15, 2002. The review period was from November 15, 2002 to January 15, 2003. Public hearings were held on the adoption of the Plan and Certification of the EIR/EIS on May 5, 6 and 8, 2003. The Plan was adopted and the FEIR was certified by the County Board of Supervisors on June 17, 2003, well after the 45 day notice requirement. Additionally, the Implementing Agreement was Volume III of the MSHCP and was available for review along with other volumes of the MSHCP. Section 14 of the Planning Agreement requires that the Parties to the Agreement will cooperate in the preparation and processing of all MSHCP environmental documents pursuant to the requirements of NEPA and CEQA.

Therefore, the Department finds that the MSHCP was developed consistent with the Planning Agreement regarding review of draft documents.

Finding 4.1.3 CDFG finds that the Plan integrates adaptive management strategies that are periodically evaluated and modified based on information from the monitoring program which will assist in the conservation of covered species and ecosystems within the Plan Area. (Section 2820(a)(2) and Section III B(2)(f-g) and III(B)(1)(a) of the NCCP General Process Guidelines)

The MSHCP Permittees have committed to a comprehensive, funded, adaptive management program to ensure the needs of species and associated habitats are met. The basis for the adaptive management program is the definition of adaptive management taken from the California NCCP Act of 2002, which states: Adaptive management means "To use the results of new information gathered through the monitoring program of the Plan and from other sources to adjust management strategies and practices to assist in providing for the conservation of covered species" (Section 2805 (a)). The basic strategy of the MSHCP regarding adaptive management is a flexible and inductive approach where ecological theory and field experimentation are combined to monitor the status of the system and respond to the unexpected.

The MSHCP contains the management and monitoring programs (Section 5.0 of Volume I (Part 1 of 1)). The species objectives, Biological Monitoring Program, and Adaptive Management Strategy are inter-related as stated on page 5-52 of Section 5. The monitoring program components of the Plan involve establishing a baseline inventory on lands being incorporated into the reserve, establishing protocols for long-term monitoring and implementing a long-term monitoring program. For adaptive management purposes, the long-term monitoring is the key element. The long-term monitoring program consists of the comprehensive repeat inventory of vegetation communities and wildlife habitats which occurs at 8-year intervals, a time period which can be used to detect broad-scale change.

The adaptive management strategy involves assessing the appropriate level of monitoring (see the Biological Monitoring Program, Section 5.0 of Volume I (Part 1 of 2) of the MSHCP and Finding 4.1.8 of this document) and then making management decisions if the data indicates that biological objectives for species and vegetation communities are not being met. In addition, the Regional Conservation Authority ("**RCA**") may authorize experimental adaptive management activities, work collaboratively with Reserve Managers, and scientific research programs regarding studies which contribute to adaptive management (page 5-36 of Section 5.0 of Volume I (Part 1 2) of the MSHCP. Adaptive management hypothesis testing will occur throughout the life of the permit and will be described in annual work plans.

The Reserve Managers and the Reserve Managers Oversight Committee of the RCA will be responsible for assessing the health of the system via the monitoring program and determining whether changes that are detected require some form of adaptive management and what those management measures will be (Sections 5.0 and 6.0 of Volume I of the MSHCP). Coordination of the management activities of the various existing and new Core Areas will enable an

ecosystem approach to monitoring, management and adaptive management and will assist in the Conservation of Covered Species and ecosystems.

Details of the MSHCP monitoring program are found in Finding 4.1.8 of this document. In order to avoid repetition, that Section is hereby incorporated by reference.

Therefore, the Department finds that the MSHCP was developed consistent with the Planning Agreement regarding inclusion of adaptive management principles.

Finding 4.1.4 CDFG finds that the Plan provides for the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level through the creation and long-term management of habitat reserves. (Section 2820(a)(3) and Section III B(2)(a, b, d and e) of the NCCP General Process Guidelines)

The MSHCP is designed as a multiple species plan in accordance with the NCCP General Process Guidelines and the tenets of conservation biology and is designed to function on a landscape/ecosystem level. The MSHCP reserve will consist of the 153,000 acres of private land and the 347,000 acres of existing Public/Quasi-Public lands which will become the hard-line MSHCP reserve as land for Conservation is acquired.

The Plan is the largest and most comprehensive HCP/NCCP ever attempted and covers a diverse landscape from urban cities to undeveloped foothills and montane forests. When fully implemented, the MSHCP will create an interconnected habitat preserve system throughout the 1.2 million acres of Western Riverside County with coverage for 146 species and 13 natural communities.

By the creation and long-term management of a landscape-level MSHCP reserve system, natural habitats, species and communities will be protected. The goal of the MSHCP is to create a self-sustaining, landscape-level reserve system. In the process of identifying reserve areas, the most intact, species rich, diverse habitats in Western Riverside County were identified and selected for Conservation (Section 3.0 of Volume 1 of the MSHCP). The potential reserves and Linkages were identified based upon vegetation maps, species occurrence data, input from the Wildlife Agencies, input from academia, and input from field biologists. The system of Core Areas and Linkages was designed to ensure perpetuation of native habitats and species based upon the data collected. A description of the MSHCP Core Areas and Linkages are found in Section 3.2.3 of Volume I (Part 1 of 2) of the MSHCP. There are 13 existing Core Areas, 5 existing Constrained Linkages, which are constricted connections expected to provide for movement of identified planned species between Core Areas where options for assembly of the connection are limited due to existing patterns of use, 1 existing Linkage, 3 existing Non-contiguous Habitat Blocks, 7 proposed Core Areas, 18 proposed Linkages, 24 proposed Constrained Linkages, 7 proposed Non-contiguous Habitat Blocks and 7 proposed extensions to existing Core Areas. Figure 3-2 (Volume I (Part 1 of 2) of the MSHCP) is a map of the proposed reserve.

Through the development of the MSHCP, land acquisition areas were identified and a broad Conservation Area was identified and further refined by the "Criteria Area". The "Criteria Area" represents the area from which 153,000 acres of private land will be conserved for the Reserve. The Criteria in the Plan will assist in determining what lands shall be acquired or otherwise conserved within the Criteria Area. The County has established a process called the Habitat Evaluation and Acquisition Negotiation Strategy by which property will be acquired for the Reserve. Property within the Reserve determined not necessary for Conservation will then become available for development through the usual development process.

The Reserve areas containing native species and habitats will be conserved in perpetuity and the Plan includes a management, monitoring and adaptive management program to ensure the ongoing health of the reserve system (Section 5.0, Volume I (Part 1 of 2) MSHCP). The long-term protection of species and habitats is the responsibility of the organization formed to oversee, administer and enforce the MSHCP, the Regional Conservation Authority, which is a joint regional authority formed by the signatory cities and County of Riverside. The RCA will oversee MSHCP implementation, including accumulating and distributing funds, acquisition of reserve lands, managing and monitoring reserve lands and Permittee compliance with the MSHCP. The duties and responsibilities of the RCA are outlined in Section 6.6.2 of Volume I (Part 2 of 2) of the MSHCP. The Wildlife Agencies will be involved with the RCA in the assemblage and management of the Reserve as specified in Section 6.6 of the MSHCP.

The individual species objectives in combination with the "Assumptions" (Section 4.1.2 of the Final EIR/EIS), the habitat protection measures in Section 6.0 of the MSHCP, and the management, monitoring and adaptive management plan (Section 5.0 of the MSHCP) will ensure the Conservation of species and habitat. Conservation of large Core Areas will also ensure Conservation by providing large areas of habitat connected by Linkages. Conservation of populations of species in different geographic Core Areas will ensure that a catastrophic event in one or multiple cores will not threaten the survival of a particular species.

The management and monitoring program is found in Section 5.0 of Volume I (Part 1 of 2) of the MSHCP and contain the measures which protect habitats and species. The management measures include general management measures and species specific management measures. General management measures are found on page 5-5 of Section 5.0. Species specific management measures are found on page 5-13 to 5-35 of Section 5. Volume II, Section B of the MSHCP includes the detailed species accounts for all of the Covered Species. Individual species accounts include biological objectives, threat assessment, and management measures.

The management measures which will be implemented include: control of unauthorized access to the MSHCP Conservation Area using fencing, gates and signage; trash removal; trespass control for illegal dumping, off-road vehicle use and vandalism; and fire management. Section 5.0 and Page IIB-2 of Volume II, Section B of the species accounts discusses implementation objectives and management measures, including: 1) upland habitat quality within the MSHCP Conservation Area will be maintained and managed in similar or better condition as when the lands are conveyed; 2) wetland habitat quality within the MSHCP Conservation Area will be maintained and managed in similar or better condition as when the lands are conveyed; 3) best

management practices will be implemented in accordance with the guidelines presented in Appendix C to the Plan, Volume I and 1601 Streambed Alteration Agreements for flood control facilities maintenance will be implemented; new lands adjacent to the MSHCP Conservation Area shall implement the Guidelines Pertaining to the Urban/Wildlands Interface from Section 6.1.4 of the MSHCP; and the maintenance of existing habitat conditions prior to reserve assembly policies in Section 6.1.5 of the MSHCP.

The MSHCP discusses measures which shall be implemented to protect Riparian/Riverine and Vernal Pool species listed on page IIB-3 and 4 (page IIB-2 of Volume II Section B and 6.1.2 of the MSHCP, Volume I). The narrow endemic policies shall be implemented for the benefit of the species listed on page IIB-4 of Volume II, Section B of the MSHCP (Section 6.1.3 of the Plan, Volume I). "Additional Survey Needs and Procedures" shall also be implemented to benefit the species listed on pages IIB-4 and 5 of Volume II, Section B of the MSHCP (Section 6.3.2 of the MSHCP, Volume I).

The MSHCP also includes implementation measures regarding "Covered Activities within the Criteria Area and Allowable Uses within the MSHCP" as per Section 7.0 of the MSHCP, Volume 1. Monitoring and management activities will be undertaken for each of the MSHCP Covered Species and these measures are detailed in Sections 5.2 and 5.3 of the MSHCP, Volume I. Finding 4.1.6 discusses the Plan and identification of compatible and incompatible activities.

The RCA will form several positions and committees to coordinate with the Wildlife Agencies and manage the reserve: the Funding Coordination Committee, the Reserve Managers Oversight Committee, the RCA Executive Director, Reserve Managers, a Monitoring Program Administrator, and Independent Science Advisors. Management activities will be implemented by the Reserve Managers and Reserve Managers Oversight Committee ("**RMOC**"), as detailed in Section 5.2.1 of Volume I (Part 1 of 2) of the MSHCP. These groups and persons will work together to implement and coordinate reserve acquisition, management of lands, the comprehensive monitoring program, and the adaptive management program and ensure that the reserve is operated to protect individual species as well as habitat landscapes in the short- and long-term. More detailed information is presented in this document on the reserve system (Finding 4.1.5.B), sustainable populations of Covered Species (Finding 4.1.5.C), habitat diversity (Finding 4.1.5.C), movement and interchange of organisms (Finding 4.1.5.E), compatible and incompatible activities (Finding 4.1.6), a monitoring program (Finding 4.1.8), adequate funding (Finding 4.1.11) and adaptive management (Finding 4.1.3 and 4.1.9).

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding the protection of biological diversity through the creation and long-term management of reserves.

Finding 4.1.5.A CDFG finds that the development of reserve systems and conservation measures in the Plan Area provides, as needed for the conservation of species: conserving, restoring, and managing representative natural and seminatural landscapes to maintain the ecological integrity of large habitat

blocks, ecosystem function, and biological diversity. (Section 2820(a)(4)(A) and NCCP General Process Guidelines III(B)(2)(e, f and g))

The MSHCP identifies 13 habitat types in seven (7) bioregions. Within these distinct 13 habitat types are a wide range of endangered and sensitive flora and fauna identified for Conservation and management. Table 2-1 of Volume I, part 1 of 2 of the Final MSHCP, displays the 50 vegetation community classifications which were collapsed to 13 general categories. These 13 communities are: montane coniferous forest; woodland and forest; coastal sage scrub; Riversidean alluvial fan sage scrub; desert scrub; chaparral; playas and vernal pools; grassland; riparian scrub, woodland, forest; meadows and marshes; cismontane alkali marsh; water; and, agricultural land.

The planning area was divided into seven bioregions which reflect areas where species turnover and habitat zone transitions are pronounced in relation to changes in landform and other environmental features. On the basis of existing data, the Bioregions reflect the different suites of species and vegetation communities in the Plan Area. The Plan proposes to conserve the following percentages of the seven bioregions (see Section 3.2.2 on page 3-19 of Volume 1) 80.3% of the Agua Tibia mountains, 71.7% of the San Jacinto Mountains, 64.6% of the San Jacinto Foothills, 59.9% of the Santa Ana Mountains, 61.3% of the Desert Transition, 34.5% of the San Bernardino Mountains, and 24.2% of the Riverside Lowlands. The discussion of bioregions is found in Section 2.1.2 on page 2-14 of Volume 1 of the MSHCP.

The ecological integrity of large habitat blocks, ecosystem function and biological diversity are contingent upon, but not limited to, the underlying scientific data, the geographic location of selected reserves, the biological reasons why Core Areas were selected, the inter-connectedness of Core Areas, the size of Core Areas, the management measures, the monitoring measures, funding and administrative management.

On a habitat or landscape level, the Plan provides for six categories of maintaining or improving habitat: 1) natural regeneration, 2) maintenance, 3) enhancement, 4) revegetation, 5) restoration, and 6) creation. The type of activity required would be determined by the Reserve Manager and be dependent upon the condition of the habitat upon entry into the system and the needs of a target species or target vegetation community in the context of the entire reserve system and the Reserve Management Oversight Committee.

The size of the Plan Area requires that a certain amount of flexibility be built into the reserve assembly process. One of the first steps is for the RCA to verify the precise acreage, location, amount and status of Public/Quasi-Public ("**PQP**") lands in the MSHCP Conservation Area. The following procedure and analysis shall apply if a Permittee elects to use Public/Quasi-Public Lands within the MSHCP Conservation Area in a way that alters the land use such that it would not contribute to Reserve Assembly: The Permittee shall make findings that the replacement acreage is biologically equivalent or superior to the existing property. The biological equivalency or superior analysis shall address the effects on habitats, Covered Species, core areas (as identified on the MSHCP Core and Linkage Map), linkages and constrained linkages (as identified on the MSHCP Core and Linkage Map), MSHCP Conservation Area configuration

and management (such as increases or decreases in edge), and ecotones (defined as the areas of adjoining Vegetation Communities, generally characterized by greater biological diversity) and other conditions affecting species diversity (such as invasion by exotic species). The Permittees shall submit the equivalency analysis in narrative and graphic form comparing the effects/benefits of the proposed project to the Wildlife Agencies (Service and California Department of Fish and Game) for review and concurrence. Impacts to Habitats within existing Public/Quasi-Public Lands shall be compensated by purchase and dedication into the MSHCP Conservation Area of land of no less than a ratio of 1:1 that is in addition to the Additional Reserve Lands. This procedure also applies to roads and other facilities which take land from Conservation Area within the MSHCP Conservation Area.

Additionally, the total acreage of the Criteria Cells (300,000 acres) is greater than the acquisition goal of 153,000 acres of private lands. Reserve Assembly will involve review of a variety of project-specific vegetation data to refine and guide the assembly process (Section 2.1.1 of the MSHCP). Because the MSHCP does not begin with a hardline reserve configuration but will result in a hardline reserve, facts on the ground may influence Reserve assembly in areas where there are multiple choices. For instance, if a Linkage is proposed to be 1,500 feet wide and the Criteria Area for this Linkage is a much wider area than the 1,500 feet, there may be multiple ways of assembling this Linkage. The Linkage does not become part of the hardline reserve until it is assembled.

Decisions on parcels acquired by the local Permittee for Reserve Assembly will be made by the Regional Conservation Authority.. In addition, the RCA and Permittee staff shall jointly review development applications within the Criteria Area to ensure that the Conservation goals of the MSHCP are met. Results of the Joint Project Review, for projects within the Criteria Area and in additional survey areas, shall be sent to the Wildlife Agencies for review. The Wildlife Agencies and the RCA staff shall also meet every ninety (90) days for at least the first 3 years to review the status of Plan Implementation (Section 6.6.2(F)(1-2) of the MSHCP). Finally, the Plan allows for a Criteria Area refinement process (Section 6.5 of the MSHCP) for the purposes of correcting minor discrepancies or inaccuracies or for evaluating alternative Conservation proposals involving single or multiple landowners and jurisdictions that are of equivalent or superior benefit to Covered Species. These changes many involve Core Areas and Linkages so long as it is demonstrated that the refinements would be beneficial to the Covered Species. The refinement process is different from the minor and major amendment process of the MSHCP (Sections 20.4 and 20.5 of the Implementing Agreement, Volume III of the MSHCP).

Integral to maintaining ecosystem integrity is the identification of a Conservation Area that consists of existing and future large Core Areas which are buffered from or take into account edge effects and which are connected by different types of Linkages to maintain habitat connectivity, genetic flow, dispersal, and provide for ecosystem function and biological diversity. Section 6.1.4 of the MSHCP contains the Guidelines Pertaining to the Urban/Wildlands Interface, which incorporate measures to consider drainage, toxics, lighting, noise, invasives, barriers, and grading/land development. The Linkages (see Finding 4.1.5.E of this document) serve the function of connecting large blocks of habitat (i.e., National Forests with Core Areas), allowing for dispersal of species and thus maintaining biodiversity. Figure 3-2

on page 3-25 of Volume I (Part 1 of 2) of the MSHCP is a map showing the proposed Cores and Habitat Blocks, proposed Linkages, and existing Cores and Linkages. Section 3.2.3 of Volume I (Part 1 of 2) contains a written description of the Conservation Area and Section 3.3 describes and shows the Conservation Area for each of the 16 Area Plans which are the community planning areas defined in the Riverside County General Plan and contains the rationale for why lands were included in the Criteria Area which is the area comprised of cells depicted on Figure 3-1 of the MSHCP. A detailed analysis of the Reserve system is found in this document in Finding 4.1.5.E.

Table 5-1 of the MSHCP discusses management responses to disturbance regimes, including fire, disturbed habitat, exotic plant invasion, sedimentation and erosion. Management actions in response to these disturbances include natural regeneration, enhancement, revegetation and restoration (pages 5-11 and 5-12 of Section 5.0 of the MSHCP). In addition, Reserve managers, in coordination with the RCA, will make determinations as to the necessity for restoration, revegetation and enhancement at their respective reserves.

Section 5.0 of Volume I (Part 1 of 1) of the MSHCP contains the management and monitoring programs. As stated on page 5-52 of Section 5, the species objectives, Biological Monitoring Program, and Adaptive Management Strategy are inter-related. The monitoring components of the Plan involve establishing a baseline inventory on lands being incorporated into the reserve, establishing protocols for long term monitoring and implementing a long-term monitoring program. For adaptive management purposes, the long-term monitoring is the key element. The long-term monitoring program consists of the comprehensive repeat inventory of vegetation communities and wildlife habitats which occurs at 8-year intervals, a time period which can be used to detect broad-scale change. Details of the MSHCP monitoring program are found in Finding 4.1.8 of this document. In order to avoid repetition, Finding 4.1.8 is hereby incorporated by reference.

The MSHCP contains a comprehensive management plan. Volume II, Section B of the MSHCP includes the detailed species accounts for all of the Covered Species. Page IIB-2 of Volume II, Section B of the species accounts discusses implementation objectives, and management measures to protect reserve habitat, including: 1) upland habitat quality within the MSHCP Conservation Area will be maintained and managed in similar or better condition as when the lands are conveyed; 2) wetland habitat quality within the MSHCP Conservation Area will be maintained and managed in similar or better condition as when the lands are conveyed; 3) best management practices will be implemented in accordance with the guidelines presented in Appendix C of the MSHCP, Volume I and 1601 Streambed Alteration Agreements for flood control facilities maintenance will be implemented; new development adjacent to the MSHCP Conservation Area shall implement the Guidelines Pertaining to the Urban/Wildlands Interface from Section 6.1.4 of the MSHCP; and the maintenance of existing habitat conditions prior to reserve assembly policies in Section 6.1.5 of the MSHCP. Additionally, Page IIB-2 of Volume II Section B of the MSHCP discusses measures in 6.1.2 of the MSHCP, Volume I, which shall be implemented to protect Riparian/Riverine and Vernal Pool species as listed on page IIB-3 and 4. The narrow endemic policies in Section 6.1.3 of the MSHCP, Volume I shall be implemented for the benefit of the species listed on page IIB-4 of Volume II, Section B of the MSHCP.

"Additional Survey Needs and Procedures" in Section 6.3.2 of the MSHCP, Volume I shall also be implemented to benefit the species listed on pages IIB-4 and 5 of Volume II, Section B of the MSHCP. Section 6.3.2 of the MSHCP states that there is not enough existing available information on the species listed on page 6-63 and 6-65 to satisfy FESA issuance criteria and therefore, additional surveys are required in order to gain the information to achieve coverage. The MSHCP states that when species-specific objectives for these species are satisfied, findings will be made and forwarded to the Reserve Managers Oversight Committee for evaluation and consideration (page 6-65 and 6-69 of Section 6.0 of the MSHCP).

In addition to the management measures to protect species, the MSHCP (page 5-8 of Section 5.0 of Volume I (Part 1 of 2) of the MSHCP) requires that species presence and continued use shall be maintained at 75% of the locations identified for each species in the species accounts and measured at 8 (eight) year intervals. Species declines below the 75% level shall trigger management actions based on site-specified information and recommendations.

The Reserve Managers and the Reserve Manager Committee of the RCA will be responsible for assessing the health of the system via the monitoring program and determining whether changes that are detected require some form of adaptive management and what that management measure will be. Coordination of the management activities of the various existing and new Core Areas will enable an ecosystem approach to monitoring, management and adaptive management and will assist in the Conservation of Covered Species and ecosystems.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding the development of a reserve system which will maintain ecosystem function and biological integrity.

Finding 4.1.5.B — CDFG finds that the development of reserve systems and conservation measures in the Plan Area provides, as needed for the conservation of species: establishing one or more reserves or other measures that provide equivalent conservation of Covered Species within the Plan Area and Linkages between them and adjacent habitat areas outside the Plan Area. (Section 2820(a)(4)(B) and General Process Guidelines III(B)(2)(a and d))

Early in the planning process a Conceptual Conservation Scenario was developed based upon existing data bases, prior planning efforts, habitat assessment workshops, species occurrence data, coastal sage scrub habitat quality modeling, existing and planned land uses and principles of conservation biology. Based upon this data a conceptual map of Core Areas and Linkages was prepared (Section 3.0 of Volume I of the MSHCP). The Conceptual Conservation Scenario was further divided into conservation analysis units for purposes of determining acreage figures. Then an informal gap analysis was used to determine gaps in Conservation. The gap analysis identified 153,000 acres of private land necessary for Conservation, in addition to the public lands. An effort was made, wherever possible, to identify the major or key populations of Covered Species and indicate them as Conservation Areas. For species where there was a dearth of information, habitat analyses were conducted to ensure that major habitat areas for these species were conserved and that inventorying would be conducted at a later date.

There are a number of existing reserves which were established either as mitigation or for single-species conservation, in particular the Stephens' kangaroo rat. The focus of prior mitigation or conservation were several target species including the Stephens' kangaroo rat, least Bell's vireo, the southwestern willow flycatcher, the coastal California gnatcatcher and the Quino checkerspot butterfly. Critical areas for these species have been identified and have been or are in the process of being acquired. For instance, the main areas containing populations of coastal California gnatcatcher are slated for Conservation. This is true for Quino checkerspot butterfly as well. This means that the major population centers are conserved and will be subject to the management and monitoring measures and much smaller, less significant populations can be allowed for take.

The identification and Conservation of key populations and the system of large core reserves in conjunction with the individual species objectives, "Assumptions" (Section 4.1.2 of the Final EIR/EIS), the habitat protection measures in Section 6.0 of the MSHCP, and the management, monitoring and adaptive management plan (Section 5.0 of the MSHCP) will ensure the Conservation of species and habitat. Conservation of large Core Areas will also ensure Conservation by providing large areas of habitat connected by Linkages. Preservation of populations of species in different geographic Core Areas will ensure that a catastrophic event in one or multiple cores will not threaten the survival of a particular species.

A discussion of the flexibility built into the reserve assembly process is described in Finding 4.1.5.A of this document.

The Conservation Area consists of a group of large Core Areas connected by a various types of Linkages to maintain connectivity and genetic flow. The MSHCP has a schematic map showing the proposed Cores and Habitat Blocks, proposed Linkages, and existing Cores and Linkages (Figure 3-2 on page 3-25 of Volume I (Part 1 of 2) and Finding 4.1.5.E of this document). The Plan contains a written description of the Conservation Area and Section 3.3 describes and shows the Conservation Area for each of the 16 Area Plans and contains the rationale for why lands were included in the Criteria Area (Section 3.2.3 of Volume I (Part 1 of 2)). The Covered Species and habitats will be conserved in perpetuity and the Plan includes a management, monitoring and adaptive management plan to ensure the ongoing health of the reserve system.

As stated in the MSHCP on page 3-4, "Connectedness through landscape Linkages and movement corridors is important because habitat fragmentation and isolation lead to extinction of local populations and are the most serious threats to biological diversity." Linkages permit the following: 1) travel, migration and meeting of mates for wide-ranging animals; 2) plant propagation; 3) interchange of genetic material; 4) movement of populations in response to environmental changes and disasters, and 5) colonization of available habitat by individuals.

The value of Linkages is that they can act as permanent residences and/or dispersal. Therefore, they can serve to help repopulate Core Areas or the Core Areas can serve to repopulate the Linkages. One goal of the MSHCP is to have multiple Linkages attached to Core Areas in order to minimize the problems associated with sinks and catastrophic incidents.

There are a significant number of Linkages in the proposed reserve system which connect reserves in the Plan Area and connect the reserves with adjoining habitat in other jurisdictions (see Finding 4.1.5.E of this document). Proposed Linkages 1, 4, 5, 6, 9, 10, 17 and 18 all connect lowland areas in Western Riverside County with substantial habitat areas. Linkage 1 connects the Santa Ana Mountains with the Lake Mathews, Estelle Mountain Core Area. Linkages 4, 5, and 6 connect Riverside County with San Bernardino County. The reserve system was also designed to take into consideration regional connectivity issues, including the San Diego MSCP, the Coachella Valley MSHCP, and the County of San Bernardino.

There are four Constrained Linkages connecting the Santa Rosa Plateau and Tenaja Corridor to San Diego County. Also proposed Linkage 9 is the Tenaja Corridor connecting the Santa Rosa Plateau to the Cleveland National Forest.

There are two Constrained Linkages between the Santa Ana Mountains and the Santa Ana River/Prado Basin/Chino Hills State Park. There is a landscape Linkage between the Santa Margarita Ecological Reserve and the Santa Rosa Plateau. Murrieta Creek, Pechanga and Temecula Creeks are Constrained Linkages connecting east-west and north-south. Pechanga Creek is a Constrained Linkage connecting Riverside and San Diego Counties.

Temecula Creek is a Constrained Linkage that connects Murrieta Creek and lands east with Vail Lake, Sage and Wilson Valleys (proposed Core Area 7). This proposed Core Area connects on the south to the Agua Tibia Mountains. Proposed Linkages 17 and 18 (Kolb Creek and Arroyo Seco Creek) connect the Wilson Valley Core Area with the Agua Tibia Wilderness. Proposed Linkage 16 (Tule Creek) connects the proposed Wilson Valley Core Area with proposed Core Area 6 (Silverado Ranch) and existing Core Area L (Beauty Mountain Management Area and Anza Borrego Desert State Park). The Wilson Valley Core Area connects to the north with Proposed Core Area 4 (Cactus Valley) and the San Bernardino Mountains. Proposed Linkage 13 (Tucalota Creek and upland habitat) connects the Wilson Valley Core Area to the Diamond Valley Lake, Lake Skinner and Johnson Ranch Core Area J.

Proposed Core Area 3 (Potrero) is connected by Linkages to the San Bernardino Mountains, the proposed Upper San Jacinto River Reserve, the existing Core Area H (Lake Perris State Recreation Area) and San Bernardino County.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding provision of reserves and Linkages for the conservation of Covered Species.

Finding 4.1.5.C CDFG finds that the development of reserve systems and conservation measures in the Plan Area provides, as needed for the conservation of species: protects and maintains habitat areas large enough to support sustainable populations of Covered Species. (Section 2820(a)(4) (C) and NCCP General Process Guidelines III(B)(2)(a, b, and d))

The Plan proposes to set aside 500,000 acres of land for habitat and species, including 153,000 acres of private land. Lands to be conserved will be assessed via the MSHCP criteria-based approach (Section 3.2 of the MSHCP) resulting in a hard line reserve. The Criteria Area is defined as the area comprised of cells depicted on Figure 3-1 of the MSHCP.

The appropriateness of the size of a habitat area is contingent upon the species or habitat that is being conserved. Generally speaking, the larger the animal, the larger the habitat required. In the Plan Area, the animal requiring the most acreage is the mountain lion. The animal with the smallest habitat requirement is the Delhi sands flower-loving fly. The approach and goal of the MSHCP is to provide large core reserves for animals with large area requirements and "postage stamp" size reserves for plants and animals with site specific requirements, i.e., which cannot be addressed through large-scale habitat protection. The MSHCP provides for habitat protection for the Delhi Sands flower-loving fly and for endemic plant species. Survey and acquisition requirements will be in effect for endemic plants until stated conservation goals are met because many of them are scarce and tied to particular soil types, (i.e., Munz's onion and San Jacinto Valley crownscale).

A description of the Core Areas and Linkage is found in Section 3.2.3. There are 13 existing Core Areas, 5 existing Constrained Linkages, 1 existing Linkage, 3 existing Non-contiguous Habitat Blocks, 7 proposed Core Areas, 18 proposed Linkages, 24 proposed Constrained Linkages, 7 proposed Non-contiguous Habitat Blocks and 7 proposed extensions to existing Core Areas. Figure 3-2 is a map of the proposed reserve.

The largest of the existing Core Areas are the National Forest Lands (Cleveland National Forest, 71,490 acres and the San Bernardino National Forest, 149,750 acres). Other existing Core Areas range in size from 2,500 acres (Sycamore Canyon) to 24,360 (Diamond Valley) and 24,750 acres (Beauty Mountain Management Area and the Anza Borrego Desert State Park). The existing Core Areas were acquired because of their resource richness, i.e., the Lake Mathews area, the Santa Rosa Plateau Ecological Reserve, the Santa Margarita Ecological Reserve, the Lake Perris State Recreation Area, and the San Jacinto Wildlife Area. The proposed Core Areas range in size from 3,220 acres (San Jacinto River) to 50,000 acres (Wilson Valley area). Again, the proposed reserves were selected because of the quality of the remaining natural habitat, openness, lack of development, lack of infrastructure, etc. The Alberhill area is an exception because of its location adjacent to the Interstate 15 and development in the Lake Elsinore area. However, the Alberhill area was selected because of the concentration of sensitive plants and the coastal California gnatcatcher population.

Linkages are an important factor in the sustainability of animal populations because of dispersal and genetic flow. An in-depth description of Linkages is provided in 4.1.5.E of this document. Several factors in whether a reserve is large enough are the configuration of the reserve in relation to edge effect, incompatible uses, invasive plants and animals, and sources of disturbance. The Plan addresses threats to species, short-term management and long-term management issues. It is expected that once protected in Core Areas, populations of species will increase. These issues are addressed in other Findings in this document. Finding 4.1.9 of this document provides a description of the management program and Finding 4.1.8 provides a

description of the monitoring program. Finding 4.1.6 provides a discussion of compatible and incompatible activities.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding providing large enough reserves for the conservation of Covered Species.

Finding 4.1.5.D CDFG finds that the development of reserve systems and conservation measures in the Plan Area provides, as needed for the conservation of species: incorporating a range of environmental gradients and high habitat diversity to provide for shifting species distributions due to changed circumstances. (Section 2820(a)(4)(D) and NCCP General Process Guidelines III(B)(2)(a, b and d))

The Plan is the largest and most comprehensive HCP/NCCP ever attempted and covers a diverse landscape from urban cities to undeveloped foothills and montane forests. In addition to the presence of multiple habitats, the Plan stretches across the Santa Ana Mountains, Riverside Lowlands, San Jacinto Foothills, San Jacinto Mountains, Agua Tibia Mountains, Desert Transition and San Bernardino Mountains bioregions. The Plan Area extends approximately from the Orange County and San Diego County boundaries east to the Coachella Valley Plan and from the San Bernardino County line south to the San Diego County line. When fully implemented, the MSHCP will create an interconnected habitat preserve system throughout the 1.2 million acres of Western Riverside County.

The MSHCP identifies 13 habitat types in seven (7) bioregions. Within these distinct 13 habitat types are a wide range of endangered and sensitive flora and fauna targeted for conservation and management. These habitat types include: montane coniferous forest, woodlands and forest, coastal sage scrub, Riversidean alluvial fan sage scrub, desert scrub, chaparral, playas and vernal pools, grassland, riparian scrub/woodland/forest, meadows and marshes, cismontane alkali marsh, open water and agricultural land. The Conservation Area stretches across the Santa Ana Mountains, Riverside Lowlands, San Jacinto Foothills, San Jacinto Mountains, Agua Tibia Mountains, Desert Transition and San Bernardino Mountains bioregions. The Plan proposes to conserve 80.2% of the Agua Tibia Mountains, 71.7% of the San Jacinto Mountains, 60.7% of the San Jacinto Foothills, 59.9% of the Santa Ana Mountains, 36.5% of the Desert Transition, 33.0% of the San Bernardino Mountains, and 23.7% of the Riverside Lowlands. Clearly, the Plan accomplishes capturing habitat diversity and environmental gradients, from lowlands to foothills to mountains.

Section 6.8 of Volume I (Part 2 of 2) of the MSHCP analyzes the issue of unforeseen and changed circumstances. The definition of "changed circumstances" is found on Page 6-102 in Section 6.8.3. The changed circumstances which are anticipated in the MSHCP are: short-interval return fire; flood; drought; and invasion by exotic species. The MSHCP provides management measures and implementation policy in the Plan to address each of these potential changed circumstances. Table 5-1 of the MSHCP discusses management responses to disturbance regimes, including fire, disturbed habitat, exotic plant invasion, sedimentation and erosion. Management actions in response to these disturbances include natural regeneration,

enhancement, revegetation and restoration (pages 5-11 and 5-12 of Section 5.0 of the MSHCP). In addition, Reserve Managers, in coordination with the RCA, will make determinations as to the necessity for restoration, revegetation and enhancement at their respective reserves.

On a habitat or landscape level, the Plan provides for six categories of maintaining or improving habitat: 1) natural regeneration, 2) maintenance, 3) enhancement, 4) revegetation, 5) restoration, and 6) creation. The type of activity required would be determined by the Reserve Manager and be dependent upon the condition of the habitat upon entry into the system and the needs of a target species or target vegetation community in the context of the entire reserve system and the Reserve Management Oversight Committee.

The problem of shifting species distribution due to changed circumstances is in part a reserve design issue and a management issue. Inclusion of multiple Linkages to Core Areas will allow for dispersal. The fact that there are multiple Core Areas supporting similar habitat and species assemblages also allows for manual relocation or pioneer species and habitat succession. These are all factors that can be handled at the reserve management level. Concentration of administration in the RCA and the committee structure will allow these issues to be discussed and dealt with on an individual reserve level but also on the totality of the reserve. Monitoring of species in the Linkages and in the reserves will give reserve administrators an idea of population trends. Coordination of monitoring programs will allow reserve administrators to make decisions to adjust existing management measures which perhaps adversely impact one species over another. Reserve management plans can be coordinated to avoid duplication and increase effectiveness of management. Reserve management plans will also have to include measures to deal with invasive plants and animals, human intrusion, off-road vehicles, fire and other anticipated changed circumstances.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding incorporation of a variety of environmental gradients and habitat diversity to allow for shifting species distribution due to changed circumstance(s).

Finding 4.1.5.E — CDFG finds that the development of reserve systems and conservation measures in the Plan Area provides, as needed for the conservation of species: sustaining the effective movement and interchange of organisms between habitat areas and maintains the ecological integrity of the habitat areas within the Plan Area. (Section 2820(a)(4)(E) and NCCP General Process Guidelines III(B)(2)(a, b and d))

The MSHCP Conservation Area will consist of a group of large Core Areas connected by a various types of Linkages to maintain connectivity and genetic flow. Figure 3-2 on page 3-25 of Volume I (Part 1 of 2) of the MSHCP is a map showing the proposed Cores and Habitat Blocks, proposed Linkages, and existing Cores and Linkages. Section 3.2.3 of Volume I (Part 1 of 2) contains a written description of the Criteria Area and Section 3.3 describes and shows the Conservation Area for each of the 16 Area Plans and contains the rationale for why lands were included in the Criteria Area. The Covered Species and habitats will be conserved in perpetuity

and the Plan includes a management, monitoring and adaptive management program to ensure the ongoing health of the reserve system.

The total acreage of the Criteria Cells (300,000 acres) is greater than the ultimate acquisition goal of 153,000 acres of private lands. Reserve Assembly will involve review of a variety of project-specific vegetation data to refine and guide the assembly process (Section 2.1.1 of the MSHCP). Because the MSHCP does not begin with a hardline reserve configuration but will result in a hardline reserve, facts on the ground may influence Reserve assembly in areas where there are multiple choices. For instance, if a Linkage is proposed to be 1,500 feet wide and the Criteria Area for this Linkage is a much wider area than the 1,500 feet, there may be multiple ways of assembling this Linkage. The Linkage does not become part of the hardline reserve until it is assembled.

Decisions on parcels to acquire for reserve assembly will be made by the Regional Conservation Authority. In addition, the RCA and Permittee staff shall jointly review development applications within the Criteria Area to ensure that the conservation goals of the MSHCP are met. Results of the Initial Project Review, for projects within the Criteria Area and in additional survey areas, shall be sent to the Wildlife Agencies for review. The Wildlife Agencies and the RCA staff shall also meet every ninety (90) days for at least the first 3 years to review the status of Plan Implementation (Section 6.6.2(F)(1-2) of the MSHCP). Finally, the Plan allows for a Criteria Area refinement process (Section 6.5 of the MSHCP) for the purposes of correcting minor discrepancies or inaccuracies or for evaluating alternative conservation proposals involving single or multiple landowners and jurisdictions that are of equivalent or superior benefit to Covered Species. These changes many involve cores and Linkages so long as it is demonstrated that the refinements would be beneficial to the Covered Species. The refinement process is different from the minor and major amendment process of the MSHCP (Sections 20.4 and 20.5 of the Implementing Agreement, Volume III of the MSHCP).

Existing and proposed roads pose a potential obstacle to wildlife movement by direct blockage of movement and/or mortality. Sections 7.5.1-5.3 of the MSHCP include guidelines for the construction of wildlife crossings and the siting and design of roads within Public/Quasi-Public Lands and the Criteria Area. In addition, the comprehensive monitoring program will conduct assessments of the effectiveness of crossings (page 5-79 of Section 5.36 of the MSHCP), including the use of radio collar transmitters, track surveys, remote camera stations, and road kill reports.

Section 3.0 of Volume 1 (Part 1 of 2) of the MSHCP describes Linkages and their utility. The distinction between Constrained Linkage and Linkages, in MSHCP, is that Constrained Linkages are a constricted connection expected to provide for movement of identified species between Core Areas, where options for assembly of the connection are limited due to existing patterns of use, and Linkages provide permanent resident live-in habitat as well as movement. Linkages provide a full range of ecosystem processes and enable seed dispersal and animal movement over a period of generations.

As stated in the MSHCP on page 3-4, "Connectedness through landscape Linkages are important because habitat fragmentation and isolation lead to extinction of local populations and are the most serious threats to biological diversity." Linkages permit the following: 1) travel, migration and meeting of mates for wide-ranging animals; 2) plant propagation; 3) interchange of genetic material; 4) movement of populations in response to environmental changes and disasters, and 5) colonization of available habitat by individuals.

A description of the Core Areas and Linkages is found in Section 3.2.3. There are 13 existing Core Areas, 5 existing Constrained Linkages, 1 existing Linkage, 3 existing Non-contiguous Habitat Blocks, 7 proposed Core Areas, 18 proposed Linkages, 24 proposed Constrained Linkages, 7 proposed Non-contiguous Habitat Blocks and 7 proposed extensions to existing Core Areas. Figure 3-2 is a map of the proposed reserve.

The EIR/EIS states that the MSHCP includes all the Core Areas and Linkages identified in the California Wilderness Coalition Report for Core Areas and Linkages in the South Coast Ecoregion, with the exception of areas which are not a part of the Plan Area, including American Indian lands.

The Linkages are too many to enumerate, but the function of Linkages are to facilitate specific wildlife movement through or facilitate the permanent residence and dispersal of species in a large landscape between Core Areas. Many riparian areas function as narrow Linkages for the movement of birds, coyotes, etc. but can also serve nesting functions as well for riparian species. The value of Linkages is that they can act as permanent residences and/or dispersal. Therefore, they can serve to help repopulate Core Areas or the Core Areas can serve to repopulate the Linkages. One goal of the MSHCP is to have multiple Linkages attached to Core Areas in order to minimize the problems associated with sinks and catastrophic incidents.

There are a significant number of Linkages in the proposed reserve system. Proposed Linkages 1, 4, 5, 6, 9, 10, 17 and 18 all connect lowland areas in Western Riverside County with substantial habitat areas. Linkage 1 connects the Santa Ana Mountains with the Lake Mathews, Estelle Mountain Core Area. Linkages 4, 5, and 6 connect Riverside County with San Bernardino County.

There are four Constrained Linkages connecting the Santa Rosa Plateau and Tenaja Corridor to San Diego County. Also proposed Linkage 9 is the Tenaja Corridor connecting the Santa Rosa Plateau to the Cleveland National Forest

There are two Constrained Linkages between the Santa Ana Mountains and the Santa Ana River/Prado Basin/Chino Hills State Park. There is a landscape Linkage between the Santa Margarita Ecological Reserve and the Santa Rosa Plateau. Murrieta Creek, Pechanga and Temecula Creeks are Constrained Linkages connecting east-west and north-south. Pechanga Creek is a Constrained Linkage connecting Riverside and San Diego Counties.

Temecula Creek is a Constrained Linkage that connects Murrieta Creek and lands east with Vail Lake, Sage and Wilson Valleys (proposed Core Area 7). This proposed Core Area connects on

the south to the Agua Tibia Mountains. Proposed Linkages 17 and 18 (Kolb Creek and Arroyo Seco Creek) connect the Wilson Valley Core Area with the Agua Tibia Wilderness. Proposed Linkage 16 (Tule Creek) connects the proposed Wilson Valley Core Area with proposed Core Area 6 (Silverado Ranch) and existing Core Area L (Beauty Mountain Management Area and Anza Borrego Desert State Park). The Wilson Valley Core Area connects to the north with Proposed Core Area 4 (Cactus Valley) and the San Bernardino Mountains. Proposed Linkage 13 (Tucalota Creek and upland habitat) connects the Wilson Valley Core Area to the Diamond Valley Lake, Lake Skinner and Johnson Ranch Core Area J.

The Diamond Valley Lake, Lake Skinner, Johnson Ranch proposed Core Area is centrally located between Proposed Core Area 2 (Antelope Valley) and the Cactus Valley Core Area and Wilson Valley Core Area.

The proposed Cactus Valley Core Area (4) is located north-south between the upper San Jacinto River Core Area and the proposed Wilson Valley Core Area. A Constrained Linkage connects the proposed Cactus Valley Core Area and the upper San Jacinto River Core Area.

Proposed Core Area 3 (Potrero) is connected by linkages to the San Bernardino Mountains, the proposed Upper San Jacinto River Reserve, the existing Core Area H (Lake Perris State Recreation Area) and San Bernardino County.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding the effective movement and interchange of organisms and maintaining the ecological integrity of the habitat areas.

Finding 4.1.6 CDFG finds that the Plan identifies activities, and any restriction on those activities, allowed within the Reserve that are compatible with the conservation of species, habitats, natural communities, and their associated ecological functions. (Section 2820(a)(5) and NCCP General Process Guidelines III(B)(2)(c and e))

The MSHCP includes implementation measures regarding "Covered Activities within the Criteria Area and Allowable Uses within the MSHCP" as per Section 7.0 of the MSHCP, Volume 1. Monitoring and management activities will be undertaken for each of the MSHCP Covered Species and these measures are detailed in Sections 5.2 and 5.3 of the MSHCP.

Integral to maintaining ecosystem integrity is the identification of a Conservation Area that consists of existing and future large Core Areas which are buffered from or take into account edge effects and which are connected by different types of Linkages to maintain habitat connectivity, genetic flow, dispersal, and provide for ecosystem function and biological diversity. Section 6.1.4 of the MSHCP contains the Guidelines Pertaining to the Urban/Wildlands Interface, which incorporate measures to consider drainage, toxics, lighting, noise, invasives, barriers, and grading/land development and minimize impacts from incompatible development.

Through the development of the MSHCP, lands for acquisition were identified and a broad Conservation Area was identified and further refined by the "Criteria Map". The "Criteria Area" represents the area from which 153,000 acres of private land will be conserved for the Reserve. The Criteria in the Plan determine what lands shall be acquired within the Criteria Area. The County has established a process called the Habitat Evaluation and Acquisition Negotiation Strategy by which property will be acquired for the Reserve. Property within the Criteria Area determined not necessary for Conservation will then become available for development through the usual development process.

For the purposes of compatible and incompatible uses the Plan Area can be divided into three general categories. The first category is for covered activities outside of the Criteria Area and Public/Quasi-Public lands (Section 7.1 of the MSHCP). Take authorization is permitted in this category subject to the policies of the MSHCP apply, i.e., areas subject to Riparian and Riverine Areas and Vernal Pools, Narrow Endemic Plant Species, and Additional Survey Needs and Procedures (Section 7.1 of the MSHCP).

The second general category is covered activities within existing Public/Quasi-Public lands (Section 7.2 of the MSHCP). The third category is covered activities within the Criteria Area.

The Plan includes guidelines for development within the Criteria Area. Section 7 of Volume I (Part 2 of 2) of the MSHCP, contains criteria for the implementation of covered public and private activities within the Criteria Area, including roads, other infrastructure, single-family homes, and agricultural lands, as well as compatible uses within the Criteria Area related to management, monitoring and scientific research.

Section 4.3 of the EIR/EIS (Volume IV of the MSHCP) includes an analysis of the impact of the MSHCP on population, housing and employment. The analysis in the EIR/EIS notes that implementation of the MSHCP will cause dwelling units and commercial facilities to be shifted to areas not slated for Conservation. The implementation of the MSHCP will be consistent with the County of Riverside's updated General Plan and Housing Element and will neither increase nor reduce the amount of development allowed pursuant to local land use controls. The EIR/EIS also states that a goal of the MSHCP is to enhance and maintain biological diversity, while accommodating projected future economic growth. Another goal is to improve the economic development climate by providing an efficient, streamlined regulatory process.

The MSHCP includes implementation measures regarding "Covered Activities within the Criteria Area and Allowable Uses within the MSHCP" as per Section 7.0 of the MSHCP. The Plan also includes guidelines for development within the Reserve. Section 7 of the MSHCP contains criteria for the implementation and maintenance of covered public and private activities within the Criteria Area, including roads, flood control activities, other infrastructure, single-family homes, and agricultural lands. The Plan also addresses compatible uses within the MSHCP Reserve related to management, monitoring and scientific research.

Conditionally compatible uses in the Conservation Area are detailed in Section 7.4.2 of the MSHCP. Generally speaking, covered public access activities consist of trails, facilities, and

passive recreational activities. Section 7.3.6 of the MSHCP identifies allowed recreational uses in State Park facilities. These uses include the Laborde Canyon Off-Highway Vehicle Park/State Vehicle Recreation Area and recreational activities within campgrounds and day use areas of State Park facilities. Each State Park facility (Lake Perris State Recreation Area, Chino Hills State Park, Mount San Jacinto State Park and State Wilderness, San Timoteo Park and Anza-Borrego State Park) has different recreational uses, but these uses may include: hiking, horseback riding, bicycling, camping, picnicking, swimming, boating and hunting. It should be noted that the type of use allowed is dependent, in part, upon the individual reserve management plans and the biological resources requiring protection.

Incompatible activities within the Criteria Area are identified in the guidelines for the siting and design of trails and facilities (Section 7.4.2), the guidelines for operation and maintenance (Section 7.2.4) and construction guidelines (Section 7.5.3). The Implementing Agreement also contains a process by which the Wildlife Agencies can consult with the Parties to resolve a dispute over whether an activity is covered or not.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding identifying compatible and incompatible activities.

Finding 4.1.7 CDFG finds that the Plan contains specific conservation measures that meet the biological needs of Covered Species and that are based upon the best available scientific information regarding the status of Covered Species and the impacts of permitted activities on those species. (Section 2820(a)(6) and NCCP General Process Guidelines III(B)(1)(a) and III(B)(2)(b, d and e))

The MSHCP was designed with ongoing input from the Wildlife Agencies, the University of California Riverside, Los Angeles County Museum, Coachella Valley Association of Governments, Camp Pendleton Amphibians and Reptiles Survey, Zoological Society of San Diego, Loma Linda University, Dr. Robert Fisher and the University of San Diego, and data from numerous biological consulting companies, include Dudek. Other data sources include personal communications with local biologists, biologists with the Wildlife Agencies, and reviewing Environmental Impact Reports and Biological Technical Reports for development projects within the Plan Area. Data on species were derived from the University of California, Riverside species occurrence database, location data from voucher specimens in museums and public-trust institutions, information from peer-reviewed journal articles, field notes at museums, technical reports by government agencies, biological sections of environmental documents, and field notes of local biologists. Additional data on plants was gathered from herbarium specimens at the San Diego Natural History Museum, Rancho Santa Ana Botanical Gardens herbarium, and UCR herbarium. Other base layer data maps include soils maps from the U.S. Department of Agriculture, Soils Conservation Service and State Soil Geographic database, USGS topographic maps, USGS Digital Orthophoto Quarter Quadrangles from USFWS, and digital aerial photographs from Eagle Aerial flown in 2001.

The conservation program consisting of Core Areas and Linkages is based upon an underlying vegetation map and areas identified by Wildlife Agencies' biologists and input from independent

biologists who are experts in their fields. Vegetation layer data is based upon the Holland classification and was derived primarily from the PSBS and KTU +A 1995 vegetation map, as well as input from biological survey reports, Weislander vegetation maps, satellite imagery, and the Dangermond/RECON data set. The reserve system also incorporates the best available species information from sources which include: the California Natural Diversity Data Base ("**CNDDB**"), the University of California Riverside Species Occurrence Database, USFWS point data information, County of Riverside information, data from environmental documents and field notes of local naturalists. As of 2001, the database contained over 12,800 records. Section 3.0 of the MSHCP describes the data collection and scientific methodology used in the formulation of the MSHCP.

Section 3.0 of the MSHCP also includes a discussion of the underlying general principles of conservation biology used in the analysis and evolution of the MSHCP reserve design, including a discussion of edge effect, wildlife movement and connectedness through landscape Linkages and movement Linkages. The information is supported by references to specific scientific papers by acknowledged experts in the field of conservation biology.

The MSHCP vegetation map, coastal sage scrub quality model and edge analysis were combined and used to identify the presence and locations of existing large habitat blocks for potential inclusion within conserved areas. These data and analyses were also used to evaluate existing and potential locations for linkages. Data were analyzed by plotting hard copy maps of data layers and using acetate overlays to assess combined layers and this method was also utilized digitally with ArcView.

Specific data will continue to be accumulated through the short- and long-term monitoring program. The initial inventory and assessment phase of the monitoring program includes completing the base GIS cover of vegetation community/wildlife habitat distribution throughout the Plan Area by Year 2, conducing baseline inventory field surveys on plant and animal species distribution and abundance, monitoring of Covered Species, identification of key stressors, developing a monitoring tracking system for managing surveys, identification of species as potential indicators of system condition, and developing long-term monitoring strategies for species/stressors (protocols, schedules, time intervals for monitoring, multi-species approaches). Specific long-term monitoring sampling locations, methods, and survey intensity will be fully developed after analyses of the habitat and species inventories.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement in that specific Conservation measures are based upon the best available scientific information.

Finding 4.1.8 CDFG finds that the Plan contains a monitoring program. (Section 2820(a)(7) and NCCP General Process Guidelines III(B)(2)(f and g))

The MSHCP contains a comprehensive management and monitoring program. The components of the program, as stated in Section 5.0, are: establishment of five (5) reserve management units;

a comprehensive biological monitoring program (Section 5.3), and adaptive strategies based upon the results of the long-term monitoring.

In order to facilitate monitoring, the habitats have been divided into seven (7) categories: coastal sage scrub/chaparral/desert scrub; grassland (and open fields including agriculture); riparian/aquatic habitats; wetland/marsh/lake; vernal pool and alkali playa; high elevation species (Forest Service Lands); and, species which require different sampling strategies.

As stated in the MSHCP, CDFG is responsible for developing the details (protocols, sample design, etc.) of the long-term monitoring strategy and for implementing the Monitoring Program for at least the first eight (8) years of the Permit. However the necessary adequate funding for the program is provided for by the Permittees. The CDFG Resource Assessment Program entered into an agreement with the Center for Conservation Biology at UC Riverside to "…develop additional inventory and monitoring strategies/protocols and to initiate implementation of some aspects of the Biological Monitoring Program…" The biological monitoring program is based upon species and vegetation community/habitat objectives, a commitment to use an adaptive approach to monitoring, and an evolving monitoring program to ensure that an appropriate level of monitoring will occur. Further the strategies involved in the monitoring program include an initial inventory and assessment phase and an adaptive work plan. The initial phase of the monitoring program consists of assembling existing data, mapping vegetation communities/wildlife habitat and inventorying Covered Species. Another strategy is to design survey and monitoring strategies to maximize the number of species and attributes that can be measured under a set of protocols. Sampling protocols will be designed to provide feedback to the objectives of the MSHCP and ensure the long-term survival of Covered Species.

Management and adaptive management strategies are dependent upon the underlying data. The inventory and monitoring aspects of the program range from simple short-term efforts like field verifying existing species occurrences to long-term monitoring of population status and trends. The framework for the Biological Monitoring Program (page 5-51 of Volume I (Part 1 of 2) of the MSHCP) consists of an initial inventory and assessment phase and the adaptive work plan. The monitoring program has essentially two phases, an initial phase of species, community and habitat inventory and assessment for the development of monitoring strategies and testing of methodologies and protocols, and a second phase of implementation of the long-term Biological Monitoring Program. The specifics of the inventory assessment phase are found on page 5-54 of Section 5. The specifics of the Long-Term Monitoring Phase are found on page 5-55 of Section 5. Once the inventory assessment phase is complete, the specific long-term monitoring sampling locations, methods, and survey intensity will be fully developed after analyses of the habitat and species inventories. Table 5-8 is a summary of the survey requirements for Covered Species according to the species objectives.

The focus of the initial biological inventory and monitoring will occur on MSHCP Public/Quasi-Public lands and will concentrate on Covered Species and vegetation communities which are considered the most underrepresented or most at risk. Sampling stations for long-term monitoring will be established in Public/Quasi-Public lands first. Inventory and assessment of

lands incorporated into the MSHCP Conservation Area will occur within two years of conveyance of such lands.

Long-term monitoring will occur at least every 8 years for Covered Species in Table 5-8 and to update the vegetation communities and wildlife habitats GIS layer and map. A key element of the long-term monitoring program is the comprehensive repeat inventory of vegetation communities and wildlife habitats which occurs at 8-year intervals, a time period which can be used to detect broad-scale change. The program will also evaluate data for the MSHCP Adaptive Management Strategy, and evaluate potential modification of monitoring strategies.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement requiring a monitoring program.

Finding 4.1.9 CDFG finds that the Plan contains an adaptive management program. (Section 2820(a)(8) and NCCP General Process Guidelines III(B)(2)(f and g))

The Plan integrates adaptive management strategies that are periodically evaluated and based upon the monitoring program. The Permittees have committed to a comprehensive, funded, adaptive management program to ensure the needs of species and associated habitats are met. The definition of adaptive management taken from the California NCCP Act of 2002 and utilized by the Plan is: "To use the results of new information gathered through the monitoring program of the Plan and from other sources to adjust management strategies and practices to assist in providing for the Conservation of Covered Species."

The adaptive management program relies on information gathered from three basic Plan components: the management plan, monitoring program and species objectives. An in-depth discussion of the monitoring program is included in Finding 4.1.8 of this document. The monitoring program provides for establishing a baseline inventory, short-term monitoring, and long-term monitoring. The long-term monitoring plan will provide information on fluctuation from the baseline and allow the Reserve Managers to assess the nature of long-term trends and whether intervention is required or whether the fluctuations are a reflection of normal demographic patterns. The management plan provides for measures to protect and maintain habitats and species.

A key element of the long-term monitoring program is the comprehensive repeat inventory of vegetation communities and wildlife habitats which occurs at 8-year intervals, a time period which can be used to detect broad-scale change, and which will be the basis for adaptive management.

The MSHCP Cooperative Organizational Structure will have a management structure to coordinate with the Wildlife Agencies and manage the reserve. Among these components are the Reserve Management Oversight Committee, the Reserve Managers Committee, a Monitoring Program Administrator and Independent Science Advisors. The Reserve Managers Committee of the RCA will be responsible for assessing the health of the system via the monitoring program

and determining whether changes that are detected require some form of adaptive management and what that management measure will be.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement that requires an adaptive management program.

Finding 4.1.10 CDFG finds that the Plan includes a timeframe and process by which reserves or other conservation measures are to be implemented, including the obligations of landowners, signatories and consequences of the failure to acquire lands in a timely manner. (Section 2820(a)(9) and NCCP General Process Guidelines III(B)(2)(e and i))

Section 6 of Volume II (Part 2 of 2) of the MSHCP is the Implementation Structure of the MSHCP. Section 6.7 discusses the Reserve Assembly Accounting. The MSHCP is a 75-year plan. The Rough Step Analysis is included in Section 6.7. This analysis provides a method by which the RCA can monitor the gains and losses of key habitats within a designated analysis unit, in order to ensure that the habitat acreage goals of a particular unit can be met and are not compromised. In addition, annual reports shall be available to the public showing habitat gains and losses associated with reserve assemblage. The purpose of this report is to ensure that overall habitat developed and habitat protected are in rough proportion.

Section 8.0 of Volume I (Part 2 of 2) of the MSHCP details the funding mechanisms for the assemblage of the MSHCP. The funding analysis projects that the MSHCP Conservation Area will be primarily assembled over the first 25 years. The management and monitoring programs will be funded in perpetuity by an endowment that will be established prior to expiration of the Permit. The funding program outlines the responsibilities of the various signatories, including local jurisdictions, Caltrans, and State Parks. The detailed funding analysis and timeline is found in Appendix B of Volume I (Part 2 of 2) of the MSHCP.

Volume III of the MSHCP is the MSHCP Implementing Agreement. Section 7.0 of the IA defines the roles and responsibilities of the various signatories, the process by which lands will be acquired for the reserve, and the reserve assembly accounting process. Section 10.0 of the IA outlines the reporting requirements, including the annual report detailing reserve assembly and specifies the details to be included in the report. Annual reporting to the Wildlife Agencies and the public provides a formal opportunity to assess progress of the Plan and address potential problems. Section 11.0 of the IA details the MSHCP Implementation Structure, including the administrative structure. Section 13.0 outlines the Permittee's take authorization and obligations.

The consequences of the failure to assemble the MSHCP are contained in Section 21.0 (Termination of Permits) and Section 23.0 (Remedies and Enforcement). Specifically, Section 23.5 states that the Wildlife Agencies shall have the right to revoke or suspend all or portions of the permits and that such action can be triggered by the following: 1) failure of a Permittee to implement the Implementation Mechanisms adopted by that agency; 2) approval of a development or project that significantly compromises the viability of the MSHCP Conservation

Area; 3) approval of a Criteria Refinement that compromises the integrity of the Conservation Area; 4) failure to comply with the rough step requirements; or 5) withdrawal of a Permittee.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement and includes a timeframe and process for implementing the reserve system.

Finding 4.1.11 CDFG finds that the Plan contains provisions that ensure adequate funding to carry out the conservation actions identified in the Plan. (Section 2820(a)(10) and NCCP General Process Guidelines III(B)(2)(h))

Section 8.0 of Volume I (Part 2 of 2) of the MSHCP details the funding mechanisms for the assemblage of the MSHCP Conservation Area. The funding analysis projects that the MSHCP Conservation Area will be assembled over the first 25 years. The management and monitoring programs will be funded in perpetuity by an endowment that will be established prior to expiration of the Permit. The funding program outlines the responsibilities of the various signatories, including local jurisdictions, state government and the federal government. The detailed funding analysis and timeline is found in Appendix B of Volume I (Part 2 of 2) of the MSHCP.

The finance plan covers five components of the MSHCP: land acquisition costs, management costs, monitoring costs, adaptive management costs and administrative costs. Table 8-2 details the total local program costs for 75 years. Over 75 years, the total MSHCP cost is estimated at $1,539,400,000. The total cost of acquisition of lands over 75 years is estimated at $733,600,000. Table 8-2 on page 8-3 of Section 8 of the MSHCP details the costs at 25 and 75 year intervals. Other components requiring funding include the biological monitoring costs at $1,600,000, program administration costs at $1,200,000 for the first 25 years and approximately $500,000 per year for the remaining life of the Plan, and adaptive management costs which will be approximately $100 million at the end of the first 25 years. Implicit in the land acquisition process ("**HANS**") is the ability of the local jurisdictions to negotiate with landowners on payment plans or the incentive program as stated above to stagger the cash outflow and help prevent a short-term cash flow drain.

Land acquisition costs are expected to be offset by the incentives program, which features development review and density bonus/clustering. The local MSHCP funding sources include local development mitigation fees, density bonus fees, regional infrastructure project contributions, landfill tipping fees and other potential new revenue sources, as detailed in Section 8.5.1. Transportation infrastructure is expected to provide $371 million over the next 25 years. As part of the County of Riverside's Measure A, approximately $121 million will be allocated to the MSHCP via a ½ cent sales tax increase. Other possible sources of mitigation include regional utility projects, local public capital construction projects, and regional flood control projects. A breakdown of funding sources is provided in Table 8-5 on page 8-20 of Section 8 of the MSHCP. In addition, the state will be contributing to the Additional Reserve Lands. In the first eight years of the Permit, Caltrans will acquire two reserves: a 2,000 acre-reserve in the eastern portion of the Criteria Area, and a 1,000 acre-reserve in the western portion of the Criteria Area. State Parks will provide 3,000 acres of reserve land in the

Badlands. State and federal agencies are expected to provide for the acquisition of 56,000 acres for the MSHCP (see Table 8-1 on page 8-2 of Section 8.0 of the MSHCP). The MSHCP states that 56,000 acres will be conserved through direct acquisition by local agencies and 41,000 acres will be acquired for Conservation through development review.

Section 8.6 requires that the Permittees and Wildlife Agencies annually evaluate the performance of the funding mechanisms to assess their adequacy and make any adjustments necessary. This evaluation process is designed as a contingency measure to monitor the flow of funds and assess unexpected developments, such as land acquisition costs rising faster than the cash flow, monitoring costs increasing faster than revenues, adaptive management costs rising faster than revenue, and revenue collections and land acquisitions do not keep pace with land development. In addition, the RCA has the ability to structure a debt financing plan with the federal or state government (Section 8.7).

In order to ensure that management and monitoring can occur, a portion of the annual revenues generated through the MSHCP will be allotted for these purposes. Projected costs for management and monitoring are $780.8 million. Reserve management costs include: ranger patrol, trash removal, access control, managing public access and other activities. Costs for biological monitoring are estimated at $1.6 to $2.4 million per year (page 8-5 of Section 8.0 of the MSHCP). The MSHCP proposes that at the end of the 25-year acquisition period, an endowment fund of $70 million will be established which would provide an annual income of $3.5 million per year for adaptive management activities. It is expected that as acquisition costs decrease, management costs will increase. Section 8.8 details two different scenarios for the financing of long-term management. The first approach is that the MSHCP would fund the annual costs for management, monitoring, adaptive management, administration and the cost of creating an endowment of $100 million. In the second approach, a long-term source of funding for all management costs would be put in place before the acquisition period is complete. The Plan states that although the life of the Plan is for 75 years, Permittees will have the permanent responsibility for managing Conservation lands.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement requirement to ensure adequate funding to carry out Conservation activities.

4.2 NCCPA of 1991 as Amended and NCCP General Process Guidelines

Because this Plan is grandfathered under 2830(e), the Plan must comply with certain laws and guidelines which existed prior to NCCPA of 2002. The Department must make findings that the Plan complies with certain NCCP General Process Guidelines, and certain provisions in the NCCPA as they existed on December 31, 2001, as described below.

Finding 4.2.1 CDFG finds that the Plan considers the impact on the use of existing agricultural lands and on conversion of agricultural land to non-agricultural purposes. (NCCP General Process Guidelines III(B)(1)(b))

The MSHCP distinguishes between existing agricultural lands and lands which are not now agricultural but may be converted to that use. The Plan requires that a database be compiled of lands that are now utilized for agricultural uses and these lands are exempt from the MSHCP mitigation requirements until converted to other uses. The Plan also discusses and provides for the expansion of existing agricultural uses and new agricultural uses. Section 6.2 of the MSHCP Implementation Structure and Sections 11.3 and 17.2 of the IA address agriculture. Section 11.3 of the IA includes a definition of "Agricultural Operations". Take authorization shall apply to lands within the MSHCP which have been actively used for ongoing agriculture for at least one of the last five (5) years preceding the effective date of this Agreement. Existing agriculture is also exempt from the payment of the Local Development Mitigation Fee or other mitigation measures. Conversion of grazing or pastureland to a tilled crop is not considered exempt under the IA. This is an important distinction because grazed lands are less intensively altered than tilled lands and native habitat will revegetate on grazed lands. To be considered existing agricultural lands, the property owner must register his/her land with the Existing Agricultural Operations Database and shall be issued a Certificate of Inclusion. The IA also includes a process for the addition of lands (Section 11.3.4) and expansion of existing agricultural lands (Section 11.3.5). The Take Authorization can be extended to a maximum of 10,000 acres of new agricultural lands within the Criteria Area and which could be expanded pursuant to Section 11.3.7 of the IA.

The Plan requires that an expansion of an agricultural use that requires a discretionary authorization shall receive take provided certain requirements are met regarding application of the MSHCP mitigation requirements. The conversion of agricultural land to non-agricultural uses would require application of MSHCP procedures (Section 6.2 of the MSHCP Implementation Structure and Sections 11.3 and 17.2 of the IA).

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement regarding consideration of the impact of agriculture and conversion of agriculture to non-agricultural uses.

Finding 4.2.2 CDFG finds that the Plan considers methods by which the Department's responsibilities under Chapter 6 of Division 2 of the Fish and Game Code, Section 1600 et. seq. can be integrated with NCCPs. (NCCP General Process Guidelines III(B)(1)(c))

Page 6-26 of Volume I (Part 1 of 2) of the MSHCP, states that the CDFG will work closely with the Army Corps of Engineers, USFWS, and local jurisdictions to ensure that Lake and Streambed Alteration Agreements are consistent with the mitigation required for Covered Species. The Department is working with the Corps and the County of Riverside to develop a master Lake and Streambed Alteration Agreement for the MSHCP. Until such time that a Lake and Streambed Alteration Agreement is approved, the existing regulatory framework is in effect.

The provision of a Special Area Management Plan ("**SAMP**") is found on page 79 of the IA and page 2-7 of Volume 1 (Part 1 of 2) of the MSHCP. The IA states that the County and Riverside County Transportation Commission in collaboration with the Army Corps of Engineers

("**ACOE**") intend to complete a Special Area Management Plan for the Santa Margarita and San Jacinto Watersheds. The MSHCP states that as part of the SAMP, the ACOE is developing a functional assessment and programmatic wetlands delineation for the two watersheds.

Therefore, the Department finds that MSHCP was developed consistent with the Planning Agreement requirement that the Plan consider methods of integrating the Department's responsibilities under Section 1600 of the Fish and Game Code with the Plan.

Finding 4.2.3 CDFG finds that the Planning Agreement contains a provision for independent science advisors. (former Section 2811)

On October 18, 1999 the County Board of Supervisors signed a contract with the University of California, Riverside for the purpose of providing formal review of the science used in documents pertaining to the Western Riverside MSHCP. The contract stipulates that the Scientific Review Panel ("**SRP**") would provide written comments on three documents: 1) a document outlining the approach taken and available data used to develop the MSHCP; 2) the biology used in preparing the MSHCP; and, 3) the biology utilized in the EIR. The SRP provided written comments on substantive documents submitted to it for review.

The SRP was appointed by the Center for Conservation Biology at the University of California Riverside in cooperation with the County of Riverside. The members of the SRP panel are: Dr. Edith Allen, Cooperative Extension, UCR; Dr. Steve Boyd, Curator of the Rancho Santa Ana Botanic Herbarium; Dr. James Diffendorfer, Department of Biology, San Diego State University; Dr. Janet Franklin, Department of Geography, San Diego State University; Dr. James Malcolm, Department of Biology, Redlands University; Dr. Richard Minnich, Department of Earth Sciences, University of California; Dr. Leonard Nunney, Department of Biology, University of California; Dr. Richard Redak, Department of Entomology, University of California; Dr. Mark Reynolds, Director of Field Stations, San Diego State University; and, Dr. David Reznick, Department of Biology, University of California. Later members of the SRP were Dr. Season Snyder, Center for Conservation Biology, and Dr. Thomas A. Scott, Cooperative Extension, University of California.

In Section 6.0 of the MSHCP, there is a discussion of the role of Independent Science Advisors and their duties and responsibilities. The Plan states that the Independent Science Advisors may be independent associated with educational institutions or public agencies, members of a non-profit organization or employees of biological science firms. Section 6.6.7 of the MSHCP states that the RCA Executive Director shall appoint independent science advisors who are qualified biologists and conservation experts, with expertise in the Covered Species and their habitats. The duties and responsibilities of the independent science advisors are detailed in Section 6.6.7(B) of the MSHCP.

5.0 OTHER FINDINGS

5.1 Fully Protected and Specially Protected Species

Finding 5.1.1 CDFG finds that the MSHCP and related Covered Activities authorized in this approval will not result in take of fully protected and specially protected species.

Section 15.5 of the Implementing Agreement (Volume III of the MSHCP) discusses fully protected species. It states that fully protected species are included in the list of Covered Species but that take of these species are not authorized by the NCCP Permit and is prohibited by the CDFG Code. There are four (4) fully protected species addressed in the MSHCP: the golden eagle, white-tailed kite, peregrine falcon and bald eagle. There is also one (1) specially protected species as identified in Fish and Game Code Section 4800: mountain lion. The IA states that CDFG concurs that the mitigation measures in the Plan are sufficient to avoid take of fully protected and specially protected species from Covered Activities. The IA also states that if these measures prove to be insufficient, it is the responsibility of CDFG to notify the RCA and propose additional measures.

Golden eagle nests in rugged, mountainous country and are susceptible to disturbance. In addition to the nest protection policy, the MSHCP proposes several measures to avoid take of this species. The Species Account (page B-216, Volume II-B and page 9-66 of the MSHCP) requires Conservation of all known nest sites (7), Conservation of undeveloped habitat within a one-mile radius around each nest site, and maintain continued use and successful reproduction at 75 percent of the known nesting localities at eight (8) year intervals. The Plan also states (page B-209) that management actions will be incorporated into the Conservation strategy to ensure that activities near nesting sites are compatible both in location and time of year.

Bald eagle is not currently known to nest within the Plan Area. The MSHCP proposes several measures to avoid take of this species. The Plan calls for the Conservation of open water habitat with a shoreline buffer of 100 meters at lakes and reservoirs and the riparian habitat within the Prado Basin and Santa Ana River and Conservation of any future identified nesting sites. The General Management Measures on page 9-57 of the MSHCP require that Reserve Managers enhance and/or create additional nesting areas in specified reserves, manage future nesting localities, monitor nests over time, and maintain the hydrologic processes in the Santa Ana River.

Peregrine falcon is a fall transient with occasional wintering and rare spring transient movement. It has occurred within every major water body and is a regular visitor to the Prado Basin. A known nest is located on the County Building in Riverside. The Plan objective for this species is to establish 20-25 pairs. In addition to the nest protection policy, the MSHCP proposes several measures to avoid take of this species. The General Management Measures on page 9-77 of the MSHCP require that Reserve Managers manage the known and future locations of this species with regard to pesticide use, utilize a 100-meter buffer for protection, and monitor the water bodies identified in the Species Conservation Objectives for this species.

White-tailed kite is found in several Core Areas, including the Prado Basin/Santa Ana River, Lake Mathews-Estelle Mountain, Temescal Wash, Wasson Canyon, Murrieta Creek, Santa Rosa Plateau, Temecula Creek, Vail Lake, Wilson Valley, Lake Skinner and Lake Perris/Mystic Lake.

Concentrations of this species are found along San Timoteo Creek and in French Valley. Ten of the eleven core breeding areas will be conserved within the Criteria Area or Public/Quasi-Public lands. The MSHCP proposes several measures to avoid take of this species. As noted in the Species Account (page B-591 of the MSHCP), management measures for this species include providing a 250-meter radius of undeveloped habitat around roosting sites, and the continued use of and successful reproduction at 75 percent of the Core Breeding Areas at three year intervals. In addition, Reserve Managers will monitor the species with regard to threats identified in the Species Accounts on page 9-90 of the MSHCP.

Mountain Lion requires large expanses of undisturbed brushy and rocky habitats and provision for dispersal and movement. A key factor for management of this species is wildlife crossings of major roadways to facilitate dispersal. Mountain lion is found in the Agua Tibia Mountains, Desert Transition, San Bernardino Mountains, San Jacinto Foothills, San Jacinto Mountains and Santa Ana Mountains. The Conservation objectives for this species involve conserving large blocks of habitat in the areas indicated above and the Conservation of dispersal and migration routes and critical crossings of highways (see Objectives 2 and 3 on page M-105 of the Species Accounts of the MSHCP). Threats to this species include habitat fragmentation, road kills, shootings, animal control measures and loss of the prey base. The MSHCP attempts to minimize take of this species by providing for Conservation of large core habitat areas and maintaining or improving the functionality of dispersal routes. Addressing wildlife crossings will ameliorate loss of animals via road kill.

One measure which specifically benefits and protects fully protected species is the MSHCP policy that known or newly observed active raptor nests shall be conserved within the Conservation Area (page 5-6 of Section 5.2.1(5) of the MSHCP). In addition, as per Table 5-8 of the Management and Monitoring Plan, baseline surveys will be conducted for the fully protected species within the first five (5) years and ongoing monitoring will occur at eight (8) year intervals. Additional measures to avoid impacts to fully protected species will be assessed and implemented as part of the monitoring and management program.

6.0 APPROVAL OF THE PLAN/NCCP TAKE PERMIT

Based on the foregoing findings, CDFG concludes that the Plan meets all necessary requirements for approval as an NCCP. CDFG hereby approves the Plan for implementation as an NCCP and authorizes the Permittees to take the species identified below in Section 6.2 (subject to the limitations in this Permit) incidental to the activities described below in Section 6.1. This take authorization is specifically conditioned on the Permittees' compliance with requirements of the Western Riverside Multiple Species Habitat Conservation Plan and the Implementing Agreement.

Terms and Conditions

Prior to each Status Meeting with the Wildlife Agencies pursuant to Section 6.6.2.F.2 of the MSHCP, the RCA shall provide to the Wildlife Agencies a copy of the Permittee's final decision document for each development application in the Criteria Area submitted for the joint

project/application review process that have been received since the last Status Meeting or Permit issuance, whichever is later. In addition, the RCA shall provide to the Wildlife Agencies a copy of the final decision documents that have been received since the last Status Meeting or Permit issuance, whichever is later, confirming that individual planned roadway projects within the Criteria Area, which are described in Section 7.3.5 of the Plan and depicted in Figure 7-1 of the Plan, are consistent with the Criteria, appropriate guidelines (MSHCP Section 7.5), and specific design features (MSHCP Table 7-4).

Permittees shall require, in accordance with standard practices, biologist send copies of all habitat assessments and copies of all focused survey results for all Covered Species that are identified under Section 6.1.3, Section 6.3.2 and the Errata Table 6-1, to the MPA.

6.1 Covered Activities

This Permit covers take of Covered Species Adequately Conserved resulting from Covered Activities that are subject to and covered by the Western Riverside Multiple Species Habitat Conservation Plan and the Implementing Agreement. Covered Activities consist of the activities defined in the IA and listed in Section 7.0 of Volume I (Part 2 of 2) of the MSHCP. There are three categories of Covered Activities: 1) activities outside the Criteria Area and Public/Quasi-Public Lands (Section 7.1); 2) activities occurring within the existing Public/Quasi-Public lands (Section 7.2); and, 3) covered activities within the Criteria Area. Activities in category 1 are exempt from criteria subject to consistency with the MSHCP policies that apply outside the Criteria Area (Riparian and Riverine Areas and Vernal Pools, Narrow Endemic Plant Species, Additional Survey Needs and Procedures, and Funding/Fee Issues). Section 6.0 of the MSHCP discloses the mitigation responsibilities and commitment to Plan implementation of the County and Cities, Regional Conservation Authority, County Flood Control, County Parks, County Waste, Riverside County Transportation Commission and Participating Special Entities.

Covered activities within the Public/Quasi-Public lands include: existing public roads (Table 7-1), maintenance activities on public roads (Section 7.0), new circulation element roads, privately maintained roads, specified maintenance activities (page 7-8), future facilities subject to equivalency findings (Section 7.2.4), maintenance of other existing facilities by permittees (Section 7.2.5), existing agricultural uses (Section 7.2.6) and CETAP roads (Sections 7.2.2 and 7.2.3). The MSHCP includes measures to ensure that additional impacts from facilities are mitigated or avoided. Future infrastructure facilities within Public/Quasi-Public Lands would be permitted subject to a finding of equivalent Conservation through individual project mitigation (Section 7.2.4 of the MSHCP). Guidelines for the equivalency analysis are found in Section 7.2.4 of the MSHCP. Maintenance of existing facilities in Public/Quasi-Public lands are permitted so long as the maintenance is within the existing disturbed area and there are no changes in the operating characteristics of the facility.

Covered activities within the Criteria Area are found in Section 7.3.2-7.3.5 of Section 7.0 of the MSHCP. These covered activities include: single-family homes on existing parcels (7.3.2); agricultural lands (7.3.3); existing roads (7.3.4); road maintenance activities (7.3.4); future, planned roads (7.3.5); circulation element roadways (7.3.5); improvements to SR 79 (7.3.5);

improvements to the Interstate 215, Interstate 15, Interstate 10, State Route 60, State Route 91 and CETAP corridors (7.3.5); activities on State Parks (7.3.6); flood control facilities (7.3.7); and, future infrastructure improvements, such as water/wastewater, electric and natural gas (7.3.9). The MSHCP includes an expedited review process for single-family homes in the Criteria Area (Section 7.3.2). Grading permit applications will be reviewed against the MSHCP Conservation Criteria to determine the most appropriate location for a residence and access roads. The review may include a habitat assessment. The MSHCP also includes a requirement for an annual report on single-family home activity to assess whether this category of development is proceeding consistent with the objectives of the Plan.

Page 7-48 of the MSHCP describes the process for determining whether the future Orange County Corridor project is consistent with the MSHCP, including an analysis of alignment and design features, consideration of species objectives (Section 9.0), siting and design criteria (Section 7.5.3), guidelines for wildlife movement design (Section 7.5.2), and construction guidelines (Section 7.5.3). General guidelines for an Orange County Corridor are listed on page 7-49 of the MSHCP, including consistency considerations and alternatives.

The Orange County-Riverside County Corridor, like the Cajalco Road Improvements, State Route 79 Improvements, and San Jacinto River Project, may be a Covered Activity subject to the identified process in the MSHCP for each project and the Minor Amendment Procedure described in Section 20.4.2 of the IA.

Allowable activities within the MSHCP Conservation Area include compatible uses and conditionally compatible uses. Compatible uses include: conservation activities; reserve management, monitoring and scientific research; emergency, safety and police services; and, emergency repairs. Conditionally compatible uses include public access and recreation and guidelines for the siting, design, operation, and maintenance of trails and facilities (Section 7.4.2).

6.2 Covered Species

Table 9-2 of the Plan shows the 146 Covered Species with nine columns of information: species name, group designation, rationale for group designation, species objectives, conservation analysis summary, take estimates, survey requirements, monitoring, and management activities. Of the 146 Covered Species, 112 are considered to be Adequately Conserved and are currently authorized for take. Four (4) Covered Species are fully protected and one (1) is specially protected and not authorized for take (see 6.3).

Another 29 Covered Species are not authorized for take until certain Conservation requirements are met at which time they will be considered to be Covered Species Adequately Conserved. Section 2.1.4 of Volume I (Part 1 of 2) and Table 9-3 list the 29 species and the objective criteria which must be met for them to be considered adequately conserved.

For 17 of the 29 species, particular species-specific Conservation objectives, which are identified in Table 9-3 of the Plan, must be satisfied to shift those particular species to the list of Covered

Species Adequately Conserved. When species-specific objectives contained in Section 9.2 and Volume II, Section B of the Plan are met for individual species described in these sections, written findings that the objectives have been met will be made by the RCA and will be transmitted to the RMOC and the Monitoring Program Administrator. Information supplied to the RMOC and MPA will include available data regarding the presence, distribution and status of the applicable species within the MSHCP Conservation Area and data supporting the conclusion that the species objectives have been met. In particular, data assembled as part of the MSHCP monitoring and Management Plan will be made available to the RMOC and the MPA. The RMOC and MPA will seek input, as appropriate, from the Independent Science Advisors, the Wildlife Agencies, management and monitoring personnel, and outside experts. The RMOC shall then notify the Wildlife Agencies that the species-specific objectives for that particular species has been met and the Wildlife Agencies will have sixty (60) days to review the data and inform the RCA if they do not agree with the conclusion of the RCA.

For the remaining 12 species, a Memorandum of Understanding must be executed with the Forest Service that addresses management for these species on Forest Service land in order to shift these species to the list of Covered Species Adequately Conserved (Table 9-3 of the MSHCP).

The MSHCP also has a narrow endemic plant policy. Surveys are required for the following species: Yucaipa onion, spreading navarretia, Johnston's rock-cress, Munz's mariposa lily, many-stemmed dudleya, San Jacinto Mountains bedstraw, Brand's phacelia, San Miguel savory, Hammitt's clay-cress, Wright's trichocoronis, California Orcutt grass, slender-horned spineflower, Munz's onion, and San Diego ambrosia. The narrow endemic plant policies are found in Section 6.1.3 of Volume I of the MSHCP. The MSHCP includes a map (Narrow Endemic Plant Species Survey Area, Figure 6-1 of Section 6.0 of the MSHCP) showing the areas that require surveys for the narrow endemic plants. The survey areas are located inside of and outside of the Criteria Area. The Plan has avoidance and minimization measures for narrow endemic plants, including a provision that 90% of the area where an endemic plant is found shall be avoided until the species-specific objectives are met. The process for conserving narrow endemic plants also includes the provision of Equivalency Findings and, if Conservation is deemed infeasible, a Determination of a Biologically Equivalent or Superior Preservation shall be made and reports submitted to the Wildlife Agencies (Section 6.11 of the MSHCP).

Furthermore, additional survey requirements are required for the following species: arroyo toad, California red-legged frog, mountain yellow-legged frog, burrowing owl, Aguanga kangaroo rat, Los Angeles pocket mouse, San Bernardino kangaroo rat, Coulter's goldfields, Davidson's saltscale, heart-leaved pitcher sage, little mousetail, mud nama, Nevin's barberry, Parish's brittlescale, prostrate navarretia, round-leaved filaree, San Jacinto Valley crownscale, smooth tarplant, thread-leaved brodiaea, and Vail Lake ceanothus (pages 6-63 and 6-65 of Section 6.0 of the MSHCP). Figure 6-2 of MSHCP shows the survey areas for plants. Figure 6-3 shows the survey area for amphibians. Figure 6-4 shows the survey area for burrowing owl. Figure 6-5 shows the survey area for mammals. The Plan states that there is not sufficient information on these species to make the findings to support FESA issuance criteria. As with Narrow Endemic Plants, the Plan requires Conservation of 90% of an area where surveys yield positive results

until such time as the Conservation goals for a particular species are met. When the Conservation goals are met, the RCA will transmit findings to the Reserve Managers Oversight Committee and the Monitoring Program Administrator. Policies and survey requirements regarding these species are found in Section 6.3.2.

6.2.1 List of 146 Covered Species

Name

Amphibians
Arroyo toad, *Bufo californicus*
California red-legged frog, *Rana aurora draytonii*
Coast range newt, *Taricha tarosa tarosa*
Mountain yellow-legged frog, *Rana mucosa*
Western spadefoot, *Scaphiopus hammondii*

Birds
American bittern, *Botaurus lentiginosus*
Bald eagle, *Haliaeetus leucocephalus*
Bell's sage sparrow, *Amphispiza belli belli*
Black swift (breeding), *Cypseloides niger*
Black-crowned night heron, *Nycticorax nycticorax*
Burrowing owl, *Athene cunicularia hypugaea*
Cactus wren, *Campylorhynchus brunneicapillus*
California horned lark, *Eremophila alpestris actia*
California spotted owl, *Strix occidentalis occidentalis*
Coastal California gnatcatcher, *Polioptila californica californica*
Cooper's hawk, *Accipiter cooperii*
Double-crested cormorant, *Phalacrocorax auritus*
Downy woodpecker, *Picoides pubescens*
Ferruginous hawk, *Buteo regalis*
Grasshopper sparrow, *Ammodramus savannarum*
Golden eagle, *Aquila chrysaetos*
Great blue heron, *Ardea herodias*
Least Bell's vireo, *Vireo bellii pusillus*
Lincoln's sparrow (breeding), *Melospiza lincolnii*
Loggerhead shrike, *Lanius ludovicianus*
Macgillivray's warbler, *Oporornis tolmiei*
Merlin, *Falco columbarius*
Mountain plover (wintering), *Charadrius montanus*
Mountain quail, *Oreortyx pictus*
Nashville warbler, *Vermivora ruficapilla*
Northern goshawk, *Accipiter gentiles*
Northern harrier (breeding), *Circus cyaneus*
Osprey, *Pandion haliaetus*

Peregrine falcon, *Falco peregrinus*
Prairie falcon (breeding), *Falco mexicanus*
Purple martin, *Progne subis*
Sharp-shinned hawk, *Accipiter striatus*
So. California rufous-crowned sparrow, *Aimophila ruficeps canescens*
Southwestern willow flycatcher, *Empidonax traillii extimus*
Swainson's hawk, *Buteo swainsoni*
Tree swallow, *Tachycineta bicolor*
Tricolored blackbird (colony), *Agelaius tricolor*
Turkey vulture (breeding), *Cathartes aura*
Western yellow-billed cuckoo, *Coccyzus americanus occidentalis*
White-faced ibis, *Plegadis chihi*
White-tailed kite, *Elanus leucurus*
Williamson's sapsucker, *Sphyrapicus thyroideus*
Wilson's warbler, *Wilsonia pusilla*
Yellow warbler, *Dendroica petechia brewsteri*
Yellow-breasted chat, *Icteria virens*

Fish
Arroyo chub, *Gila orcutti*
Santa Ana sucker, *Catastomus santaanae*

Invertebrates
Riverside fairy shrimp, *Streptocephalus woottoni*
Santa Rosa Plateau fairy shrimp, *Linderiella santarosae*
Vernal pool fairy shrimp, *Branchinecta lynchi*
Delhi sands flower-loving fly, *Rhaphiomidas terminatus abdominalis*
Quino checkerspot butterfly, *Euphydryas editha quino*

Mammals
Aguanga kangaroo rat, *Dipodomys merriami collinues*
Bobcat, *Lynx rufus*
Brush rabbit, *Sylvilagus bachmani*
Coyote, *Canis latrans*
Dulzura kangaroo rat, *Dippodomys simulans*
Long-tailed weasel, *Mustela frenata*
Los Angeles pocket mouse, *Perognathus longimembris brevinasus*
Mountain lion, *Puma concolor*
Northwestern San Diego pocket mouse, *Chaetodipus fallax falla*
San Bernardino flying squirrel, *Glaucomys sabrinus californicus*
San Bernardino kangaroo rat, *Dipodomys merriami parvus*
San Diego black-tailed jackrabbit, *Lepus californicus bennettii*
San Diego desert woodrat, *Neotoma lepida intermedia*
Stephens' kangaroo rat, *Dipodomys stephensi*

Plants
Beautiful hulsea, *Hulsea vestita* ssp. *callicarpha*
Brand's phacelia, *Phacelia stellaris*
California beardtongue, *Penstemon californicus*
California bedstraw, *Galium californicus* ssp. *primum*
California mulhy, *Muhlenbergia californica*
California black walnut, *Juglans californica* var *californica*
California Orcutt grass, *Orcuttia californica*
Chickweed oxytheca, *Oxytheca caryophylloides*
Cleveland's bush monkeyflower, *Mimulus clevelandii*
Cliff cinquefoil, *Potentilla rimicola*
Coulter's goldfields, *Lasthenia glabrata* ssp.*coulteri*
Coulter's matilija poppy, *Romneya coulteri*
Davidson's saltscale, *Atriplex serenana* var *davidsonii*
Englemann oak, *Quercus engelmannii*
Fish's milkwort, *Polygala cornuta* var. *fishiae*
Graceful tarplant, *Holocarpha virgata* ssp. *elongate*
Hall's monardella, *Monardella macrantha* ssp. *Hallii*
Hammitt's clay cress, *Sibaropsis hammittii*
Heart-leaved pitcher sage, *Lepechinia cardiophylla*
Intermediate mariposa lily, *Calochortus weedii* var. *intermedius*
Jaeger's milk-vetch, *Astragalus pachypus* var. *jaegeri*
Johnston's rock cress, *Arabis johnstonii*
Lemon lily, *Lilium parryi*
Little mousetail, *Myosurus minimus*
Long-spined spineflower, *Chorizanthe polygonoides* var. *longispina*
Many-stemmed dudleya, *Dudleya multicaulis*
Mojave tarplant, *Deinandra mohavensis*
Mud nama, *Nama stenocarpum*
Munz's mariposa lily, *Calochortus palmeri* var. *munzii*
Munz's onion, *Alium munzii*
Nevin's barberry, *Berberis nevinii*
Ocellated Humboldt lily, *Lilium humboldtii* ssp. *ocellatum*
Orcutt's brodiaea, *Brodiaea orcuttii*
Palmer's grapplinghook, *Harpagonella palmeri*
Palomar monkeyflower, *Mimulus diffusus*
Parish's brittlescale, *Atriplex parishii*
Parish's meadowfoam, *Limnanthes gracilis* var. *parishii*
Parry's spineflower, *Chorizanthe parryi* var. *parryi*
Payson's jewelflower, *Caulanthus simulans*
Peninsular spineflower, *Chorizanthe leptotheca*
Plummer's mariposa lily, *Calochortus plummerae*
Prostrate navarretia, *Navarretia prostrate*
Prostrate spineflower, *Chorizanthe procumbens*
Rainbow manzanita, *Arctostaphylos rainbowensis*

Round-leaved filaree, *Erodium machrophyllum*
San Diego ambrosia, *Ambrosia pumila*
San Diego button-celery, *Eryngium aristulatum* var. *parishii*
San Jacinto Mountains bedstraw *Galium angustifolium* ssp. *jacinticum*
San Jacinto Valley crownscale, *Atriplex coronata* var. *notatior*
San Miguel savory, *Satureja chandleri*
Santa Ana River woollystar, *Eriastrum densifolium* ssp. s*anctorum*
Shaggy-haired alum root, *Heuchera hirsutissima*
Slender-horned spineflower, *Dodecahema leptoceras*
Small-flowered microseris, *Microseris douglasii* var. *platycarpha*
Small-flowered morning-glory, *Convolvulus simulans*
Smooth tarplant, *Centromadia pungens* ssp. *Laevis*
Spreading navarretia, *Navarretia fossalis*
Sticky-leaved dudleya, *Dudleya viscida*
Thread-leaved brodiaea, *Brodiaea filifolia*
Vail Lake ceanothus, *Ceanothus ophiochilus*
Vernal barley, *Hordeum intercedens*
Wright's trichocoronis, *Trichocoronis wrightii* var. *wrightii*
Yucaipa onion, *Allium marvinii*

Reptiles
Belding's orange-throated whiptail, *Cnemidophorus hyperythrus beldingi*
Coastal western whiptail, *Cnemidophorus tigris multiscutatus*
Granite night lizard, *Xantusia henshawi henshawi*
Granite spiny lizard, *Sceloporus orcutti*
Northern red-diamond rattlesnake, *Crotalus ruber ruber*
San Bernardino mountain kingsnake,
San Diego banded gecko, *Coleonyx variegates abbottii*
San Diego horned lizard, *Phrynosoma coronatum blainville*
San Diego mountain kingsnake,
Southern rubber boa, *Charina bottae umbratica*
Southern sagebrush lizard, *Sceloporus graciosus vandenburgianus*
Western pond turtle, *Clemmys marmorata pallida*

6.2.2 Species by Take Coverage Categories

Regarding take authorization, the list of Covered Species is divided into three categories: 1) Covered Species Adequately Conserved; 2) Covered Species Adequately Conserved once species-specific conservation objectives are satisfied; and, 3) Fully Protected and Specially Protected Species.

6.2.2.1 Covered Species Adequately Conserved

These species can be taken upon permit issuance.

Amphibians
Arroyo toad, *Bufo californicus*
California red-legged frog, *Rana aurora draytonii*
Coast range newt, *Taricha tarosa tarosa*
Mountain yellow-legged frog, *Rana mucosa*
Western spadefoot, *Scaphiopus hammondii*

Birds
American bittern, *Botaurus lentiginosus*
Bell's sage sparrow, *Amphispiza belli belli*
Black swift (breeding), *Cypseloides niger*
Black-crowned night heron, *Nycticorax nycticorax*
Burrowing owl, *Athene cunicularia hypugaea*
Cactus wren, *Campylorhynchus brunneicapillus*
California horned lark, *Eremophila alpestris actia*
Coastal California gnatcatcher, *Polioptila californica californica*
Cooper's hawk, *Accipiter cooperii*
Double-crested cormorant, *Phalacrocorax auritus*
Downy woodpecker, *Picoides pubescens*
Ferruginous hawk, *Buteo regalis*
Great blue heron, *Ardea herodias*
Least Bell's vireo, *Vireo bellii pusillus*
Loggerhead shrike, *Lanius ludovicianus*
Macgillivray's warbler, *Oporornis tolmiei*
Merlin, *Falco columbarius*
Mountain plover (wintering), *Charadrius montanus*
Mountain quail, *Oreortyx pictus*
Nashville warbler, *Vermivora ruficapilla*
Northern goshawk, *Accipiter gentiles*
Northern harrier (breeding), *Circus cyaneus*
Osprey, *Pandion haliaetus*
Prairie falcon (breeding), *Falco mexicanus*
Purple martin, *Progne subis*
Sharp-shinned hawk, *Accipiter striatus*
So. California rufous-crowned sparrow, *Aimophila ruficeps canescens*
Southwestern willow flycatcher, *Empidonax traillii extimus*
Swainson's hawk, *Buteo swainsoni*
Treeswallow, *Tachycineta bicolor*
Tricolored blackbird (colony), *Agelaius tricolor*
Turkey vulture (breeding), *Cathartes aura*
Western yellow-billed cuckoo, *Coccyzus americanus occidentalis*
White-faced ibis, *Plegadis chihi*
Wilson's warbler, *Wilsonia pusilla*
Yellow warbler, *Dendroica petechia brewsteri*
Yellow-breasted chat, *Icteria virens*

Fish
Arroyo chub, *Gila orcutti*
Santa Ana sucker, *Catastomus santaanae*

Invertebrates
Riverside fairy shrimp, *Streptocephalus woottoni*
Santa Rosa Plateau fairy shrimp, *Linderiella santarosae*
Vernal pool fairy shrimp, *Branchinecta lynchi*
Delhi sands flower-loving fly, *Rhaphiomidas terminatus abdominalis*
Quino checkerspot butterfly, *Euphydryas editha quino*

Mammals
Aguanga kangaroo rat, *Dipodomys merriami collinues*
Bobcat, *Lynx rufus*
Brush rabbit, *Sylvilagus bachmani*
Coyote, *Canis latrans*
Dulzura kangaroo rat, *Dippodomys simulans*
Long-tailed weasel, *Mustela frenata*
Los Angeles pocket mouse, *Perognathus longimembris brevinasus*
Northwestern San Diego pocket mouse, *Chaetodipus fallax fallax*
San Bernardino kangaroo rat, *Dipodomys merriami parvus*
San Diego black-tailed jackrabbit, *Lepus californicus bennettii*
San Diego desert woodrat, *Neotoma lepida intermedia*
Stephens' kangaroo rat, *Dipodomys stephensi*

Plants
Brand's phacelia, *Phacelia stellaris*
California beardtongue, *Penstemon californicus*
California black walnut, *Juglans californica* var *californica*
California Orcutt grass, *Orcuttia californica*
Coulter's goldfields, *Lasthenia glabrata* ssp.*coulteri*
Davidson's saltscale, *Atriplex serenana* var *davidsonii*
Englemann oak, *Quercus engelmannii*
Hall's monardella, *Monardella macrantha* ssp. *Hallii*
Hammitt's clay cress, *Sibaropsis hammittii*
Heart-leaved pitcher sage, *Lepechinia cardiophylla*
Jaeger's milk-vetch, *Astragalus pachypus* var. *jaegeri*
Johnston's rock cress, *Arabis johnstonii*
Little mousetail, *Myosurus minimus*
Long-spined spineflower, *Chorizanthe polygonoides* var. *longispina*
Many-stemmed dudleya, *Dudleya multicaulis*
Mud nama, *Nama stenocarpum*
Munz's mariposa lily, *Calochortus palmeri* var. *munzii*
Munz's onion, *Alium munzii*

Nevin's barberry, *Berberis nevinii*
Orcutt's brodiaea, *Brodiaea orcuttii*
Palmer's grapplinghook, *Harpagonella palmer*
Palomar monkeyflower, *Mimulus diffusus*
Parish's brittlescale, *Atriplex parishii*
Parish's meadowfoam, *Limnanthes gracilis* var. *parishii*
Payson's jewelflower, *Caulanthus simulans*
Prostrate navarretia, *Navarretia prostrate*
Prostrate spineflower, *Chorizanthe procumbens*
Round-leaved filaree, *Erodium machrophyllum*
San Diego ambrosia, *Ambrosia pumila*
San Diego button-celery, *Eryngium aristulatum* var. *parishii*
San Jacinto Mountains bedstraw *Galium angustifolium* ssp. *jacinticum*
San Jacinto Valley crownscale, *Atriplex coronata* var. *notatior*
San Miguel savory, *Satureja chandleri*
Santa Ana River woollystar, *Eriastrum densifolium* ssp. s*anctorum*
Slender-horned spineflower, *Dodecahema leptoceras*
Small-flowered morning-glory, *Convolvulus simulans*
Smooth tarplant, *Centromadia pungens* ssp. *Laevis*
Spreading navarretia, *Navarretia fossalis*Thread-leaved brodiaea, *Brodiaea filifolia*
Thread-leaved brodiaea, *Brodiaea filifolia*
Vail Lake ceanothus, *Ceanothus ophiochilus*
Vernal barley, *Hordeum intercedens*
Wright's trichocoronis, *Trichocoronis wrightii* var. *wrightii*
Yucaipa onion, *Allium marvinii*

Reptiles
Belding's orange-throated whiptail, *Cnemidophorus hyperythrus beldingi*
Coastal western whiptail, *Cnemidophorus tigris multiscutatus*
Granite night lizard, *Xantusia henshawi henshawi*
Granite spiny lizard, *Sceloporus orcutti*
Northern red-diamond rattlesnake, *Crotalus ruber ruber*
San Diego banded gecko, *Coleonyx variegates abbottii*
San Diego horned lizard, *Phrynosoma coronatum blainvillei*
Western pond turtle, *Clemmys marmorata pallida*

6.2.2.2 Covered Species Adequately Conserved once species-specific conservation objectives are satisfied

Another 29 Covered Species are not authorized for take until certain Conservation requirements are met at which time they will be considered to be Covered Species Adequately Conserved. Section 2.1.4 of Volume I (Part 1 of 2) and Table 9-3 list the 29 species and the objective criteria which must be met for them to be considered adequately conserved.

For 17 of the 29 species, particular species-specific Conservation objectives, which are identified

in Table 9-3 of the Plan, must be satisfied to shift those particular species to the list of Covered Species Adequately Conserved. When species-specific objectives contained in Section 9.2 and Volume II, Section B of the Plan are met for individual species described in these sections, written findings that the objectives have been met will be made by the RCA and will be transmitted to the RMOC and the Monitoring Program Administrator. Information supplied to the RMOC and MPA will include available data regarding the presence, distribution and status of the applicable species within the MSHCP Conservation Area and data supporting the conclusion that the species objectives have been met. In particular, data assembled as part of the MSHCP monitoring and Management Plan will be made available to the RMOC and the MPA. The RMOC and MPA will seek input, as appropriate, from the Independent Science Advisors, the Wildlife Agencies, management and monitoring personnel, and outside experts. The RMOC shall then notify the Wildlife Agencies that the species-specific objectives for that particular species has been met and the Wildlife Agencies will have sixty (60) days to review the data and inform the RCA if they do not agree with the conclusion of the RCA.

For the remaining 12 species, a Memorandum of Understanding must be executed with the Forest Service that addresses management for these species on Forest Service land in order to shift these species to the list of Covered Species Adequately Conserved (Table 9-3 of the MSHCP).

Birds
California spotted owl, *Strix occidentalis occidentalis*
Grasshopper sparrow, *Ammodramus savannarum*
Lincoln's sparrow (breeding), *Melospiza lincolnii*
Williamson's sapsucker, *Sphyrapicus thyroideus*

Mammals
San Bernardino flying squirrel, *Glaucomys sabrinus californicus*

Plants
Beautiful hulsea, *Hulsea vestita* ssp. *callicarpha*
California bedstraw, *Galium californicum* ssp. *primum*
California muhly, *Muhlenbergia californica*
Chickweed oxytheca, *Oxytheca caryophylloides*
Clevelands's bush monkeyflower, *Mimulus clevelandii*
Cliff cinquefoil, *Potentilla rimicola*
Coulter's matilija poppy, *Romneya coulteri*
Fish's milkwort, *Polygala cornuta* var. *fishiae*
Graceful tarplant, *Holocarpha virgata* ssp. *elongate*
Intermediate mariposa lily, *Calochortus weedii* var. *intermedius*
Lemon lily, *Lilium parryi*
Mojave tarplant, *Deinandra mohavensis*
Ocellated Humboldt lily, *Lilium humboldtii* ssp. *ocellatum*
Parry's spineflower, *Chorizanthe parryi* var. *parryi*
Peninsular spineflower, Chorizanthe leptotheca

Plummer's mariposa lily, *Calochortus plummerae*
Rainbow manzanita, *Arctostaphylos rainbowensis*
Shaggy-haired alumroot, Heuchera hirsutissima
Small-flowered microseris, *Microseris douglasii* var. *platycarpha*
Sticky-leaved dudleya, *Dudleya viscida*

Reptiles
San Bernardino mountain kingsnake, *Lampropeltis zonata parvirubra*
San Diego mountain kingsnake, *Lampropeltis zonata pulchra*
Southern rubber boa, *Charina bottae umbratica*
Southern sagebrush lizard, *Sceloporus graciosus vandenburgianus*

6.2.2.3 Fully Protected and Specially Protected Species

Take of these species must be avoided

Bald eagle, *Haliaeetus leucocephalus*
Golden eagle, *Aquila chrysaetos*
Peregrine falcon, *Falco peregrinus*
White-tailed kite, *Elanus leucurus*
Mountain lion, *Puma concolor*

6.3 Fully Protected and Specially Protected Species

As set forth in the NCCP findings, above, CDFG has determined that the Plan provides for the Conservation and management of four state fully protected species and one state specially protected. The four state fully protected species in the MSHCP Plan Area are: golden eagle, *Aquila chrysaetos,* bald eagle, *Haliaeetus leucocephalus,* white-tailed kite, *Elanus leucurus, and* peregrine falcon, *Falco peregrinus* and the one specially protected species is Mountain lion, *Puma concolor.*

As stated in the IA (Section 15.5), state fully protected species are included in the list of Covered Species. Fish and Game Code Section 3511 prohibits CDFG from authorizing take of these species at this time. Consequently, take of these four species is not authorized at the time this NCCP Permit is issued. CDFG has, however, determined that activities covered by the Plan can be carried out without causing take of the state fully protected birds (see Finding 5.2.1, above). Therefore, consistent with the terms of the Implementing Agreement, the Permittees may apply for an amendment to this Permit for these species in the event Section 3511 is repealed or amended in a manner that allows CDFG to authorize take of these birds under the Natural Community Conservation Planning Act.

CDFG acknowledges and agrees that if the measures set forth in the MSHCP are fully complied with, the Covered Activities are not likely to result in take of these species. If CDFG determines that such measures are not adequate to prevent take of one of the state fully protected species, CDFG shall notify the RCA and Permittees in writing of such discovery and proposed new,

additional, or different Conservation measures that it believes are necessary to avoid Take of these species.

If at any time there is a change in state law such that CDFG may issue a Section 2081(b) Permit, other permit, or authorization allowing the take of any species subject to California Fish and Game Code, Sections 3511, 4700, 4800, 5050 or 5515, the Permittees may apply for an amendment of the MSHCP and NCCP Permit or for a new permit for such species. In processing any such application, CDFG shall give good faith consideration to Take avoidance and mitigation measures already provided in the MSHCP and shall issue the amendment or Permit under the same terms and conditions as the existing NCCP Permit, to the extent permitted by law.

6.4 Limitations

This take authorization does not constitute or imply compliance with, or entitlement to proceed with any project under laws and regulations beyond the authority and jurisdiction of CDFG. The Permittees have independent responsibility for compliance with any and all applicable laws and regulations.

7.0 AMENDMENTS

This NCCP Permit may be amended in a manner consistent with provisions in the Western Riverside Multiple Species Habitat Conservation Plan and the Implementing Agreement. For example, an amendment will be considered in the event a species not identified in this NCCP Permit is listed as endangered or threatened pursuant Fish and Game Code Section 2070, or becomes a candidate for such listing pursuant to Fish and Game Code Section 2074.2, provided the Permittees provide for the conservation and management of the species.

8.0 SUSPENSION AND TERMINATION

This NCCP Permit is subject to suspension or termination by action of the Director of CDFG in accordance with the terms of the IA (Section 23.5).

9.0 DURATION

This NCCP Permit shall remain effective for 75 (seventy-five) years from the effective date below, unless suspended, terminated or extended by earlier action of the Director of CDFG.

Approved by:

Date: _____

Ronald D. Rempel, Deputy Director
California Department of Fish and Game

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL: November 7, 2018
rbrady@rivco.org
Riverside County Planning Department
Attn: Russell Brady, Project Planner
4080 Lemon Street, 12th Floor
P.O. Box 1409
Riverside, CA 92502-1409

Notice of Preparation of a Draft Environmental Impact Report for the proposed Canterwood: Change of Zone No. 1800007, Tentative Tract Map 37439, Plot Plan No. 180024 project

South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the Draft Environmental Impact Report (EIR). Please send SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address shown in the letterhead. **In addition, please send with the** Draft **EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[1]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, SCAQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from SCAQMD's Subscription Services Department by calling (909) 396-3720. More guidance developed since this Handbook is also available on SCAQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

[1] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

SCAQMD has also developed both regional and localized significance thresholds. SCAQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to SCAQMD's CEQA regional pollutant emissions significance thresholds to determine air quality impacts. SCAQMD's CEQA regional pollutant emissions significance thresholds can be found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by SCAQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the proposed project and all air pollutant sources related to the proposed project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance[2] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

Mitigation Measures

In the event that the proposed project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project

[2] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the proposed project, including:

- Chapter 11 "Mitigating the Impact of a Project" of SCAQMD's *CEQA Air Quality Handbook.* SCAQMD's CEQA web pages available here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- SCAQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Alternatives

In the event that the proposed project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a "no project" alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the Draft EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.

Permits and SCAQMD Rules

In the event that the proposed project requires a permit from SCAQMD, SCAQMD should be identified as a responsible agency for the proposed project. For more information on permits, please visit SCAQMD's webpage at: http://www.aqmd.gov/home/permits. Questions on permits can be directed to SCAQMD's Engineering and Permitting staff at (909) 396-3385.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at SCAQMD's webpage at: http://www.aqmd.gov.

SCAQMD staff is available to work with the Lead Agency to ensure that project air quality and health risk impacts are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact Alina Mullins, Assistant Air Quality Specialist, at amullins@aqmd.gov or (909) 396-2402.

Sincerely,

Daniel Garcia

Daniel Garcia
Program Supervisor
Planning, Rule Development & Area Sources

DG/AM
RVC181009-12
Control Number

SCAG
INNOVATING FOR A BETTER TOMORROW

SOUTHERN CALIFORNIA
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November 7, 2018

Mr. Russell Brady, Project Planner
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RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Canterwood Project (Change of Zone (CZ) No. 1800007, Tentative Tract Map (TTM) No. 37439, Plot Plan (PPT) No. 180024) [SCAG NO. IGR9754]

Dear Mr. Brady,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Canterwood Project (Change of Zone (CZ) No. 1800007, Tentative Tract Map (TTM) No. 37439, Plot Plan (PPT) No. 180024) ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including the Sustainable Communities Strategy (SCS) pursuant to Senate Bill (SB) 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] SCAG's feedback is intended to assist local jurisdictions and project proponents to implement projects that have the potential to contribute to attainment of Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS) goals and align with RTP/SCS policies.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Canterwood Project (Change of Zone (CZ) No. 1800007, Tentative Tract Map (TTM) No. 37439, Plot Plan (PPT) No. 180024) in Riverside County. The proposed project includes 574 single-family dwelling units, open space and drainage lots, and a minimum 8.96-acre community park on a 158.18-acre site.

When available, please send environmental documentation to *SCAG's Los Angeles office in Los Angeles (900 Wilshire Boulevard, Ste. 1700, Los Angeles, California 90017) or by email to au@scag.ca.gov* providing, at a minimum, the full public comment period for review.

If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Anita Au, Associate Regional Planner, at (213) 236-1874 or au@scag.ca.gov. Thank you.

Sincerely,

Ping Chang

Ping Chang
Acting Manager, Compliance and Performance Monitoring

[1] Lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the 2016 RTP/SCS for the purpose of determining consistency for CEQA. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a determination of consistency with the 2016 RTP/SCS for CEQA.

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CANTERWOOD PROJECT (CZ NO. 1800007, TTM NO. 37439, PPT NO. 180024) [SCAG NO. IGR9754]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS. For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the RTP/SCS.

2016 RTP/SCS GOALS

The SCAG Regional Council adopted the 2016 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 (see http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx). The goals included in the 2016 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2016 RTP/SCS are the following:

SCAG 2016 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and active transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies**
	**SCAG does not yet have an agreed-upon security performance measure.*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis in a table format. Suggested format is as follows:

SCAG 2016 RTP/SCS GOALS		
	Goal	Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

2016 RTP/SCS STRATEGIES

To achieve the goals of the 2016 RTP/SCS, a wide range of land use and transportation strategies are included in the 2016 RTP/SCS. Technical appendances of the 2016 RTP/SCS provide additional supporting information in detail. To view the 2016 RTP/SCS, please visit: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. The 2016 RTP/SCS builds upon the progress from the 2012 RTP/SCS and continues to focus on integrated, coordinated, and balanced planning for land use and transportation that the SCAG region strives toward a more sustainable region, while the region meets and exceeds in meeting all of applicable statutory requirements pertinent to the 2016 RTP/SCS. These strategies within the regional context are provided as guidance for lead agencies such as local jurisdictions when the proposed project is under consideration.

DEMOGRAPHICS AND GROWTH FORECASTS

Local input plays an important role in developing a reasonable growth forecast for the 2016 RTP/SCS. SCAG used a bottom-up local review and input process and engaged local jurisdictions in establishing the base geographic and socioeconomic projections including population, household and employment. At the time of this letter, the most recently adopted SCAG jurisdictional-level growth forecasts that were developed in accordance with the bottom-up local review and input process consist of the 2020, 2035, and 2040 population, households and employment forecasts. To view them, please visit http://www.scag.ca.gov/Documents/2016GrowthForecastByJurisdiction.pdf. The growth forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts			Adopted Unincorporated County of Riverside Forecasts		
	Year 2020	Year 2035	Year 2040	Year 2020	Year 2035	Year 2040
Population	19,663,000	22,091,000	22,138,800	385,600	471,200	499,200
Households	6,458,000	7,325,000	7,412,300	121,800	153,200	162,900
Employment	8,414,000	9,441,000	9,871,500	96,700	139,700	156,600

MITIGATION MEASURES

SCAG staff recommends that you review the Final Program Environmental Impact Report (Final PEIR) for the 2016 RTP/SCS for guidance, as appropriate. SCAG's Regional Council certified the Final PEIR and adopted the associated Findings of Fact and a Statement of Overriding Considerations (FOF/SOC) and Mitigation Monitoring and Reporting Program (MMRP) on April 7, 2016 (please see: http://scagrtpscs.net/Pages/FINAL2016PEIR.aspx). The Final PEIR includes a list of project-level performance standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible. Project-level mitigation measures are within responsibility, authority, and/or jurisdiction of project-implementing agency or other public agency serving as lead agency under CEQA in subsequent project- and site- specific design, CEQA review, and decision-making processes, to meet the performance standards for each of the CEQA resource categories.

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Making Conservation a California way of Life.

November 26, 2018

RIV 215 PM 17.27
RIV 79 PM 14.00

Mr. Russell Brady
Riverside County Planning Department
P.O. Box 1409
Riverside, CA 92502

Subject: Canterwood: Change of Zone No. 1800007 (CZ 1800007); Tentative Tract Map No. 37439 (TTM 37439) ; Plot Plan No. 180024 (PPT 180024) - Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)

Dear Mr. Brady

The California Department of Transportation (Caltrans) has completed the review of documents submitted regarding a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) prepared for the "Canterwood" Project. The project proposes to develop 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. The project is located in the County of Riverside and is bounded by Holland Road to the north, Leon Road to the west, Eucalyptus Road to the east and Craig Avenue to the south. Access to the proposed project is provided via any of these streets.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. Under the California Environmental Quality Act (CEQA), we are required to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of Riverside County, it is also subject to the policies and regulations that govern the SHS due to the project's potential impact to State facilities. After reviewing the documents submitted for this proposal, we have the following comments.

Multimodal Accessibility

Caltrans views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Furthermore, Caltrans is committed to ensuring that a multimodal transportation system serves the local development project. The following are our comments concerning multimodal accessibility:

Transit

- The Riverside Transit Agency (RTA) does not provide service to this location, the nearest bus stop is 2.3 miles away (11 minutes bicycling, 45 minutes walking.) We recommend the project proponent coordinate with RTA to address any potential route modifications and / or bus stop improvements that may be warranted as a result of this development.

Travel Demand Management

- The County of Riverside's Transportation Demand Management (TDM) Requirements (Riverside County, California, Ordinance No. 726) requires any new development project interested in reducing its required transportation improvement costs or improving its transportation viability and efficiency to develop a transportation demand management plan. The plan must include the proposed trip level and outlining proposed transportation demand management measures for the project to achieve the trip level proposed. At a minimum, a proposed trip level shall be equal to or greater than 12% of the vehicle trips which would normally be generated by the project commencing in 1994, 20% of the vehicle trips which would normally be generated by the project commencing in 2000, and 30% of the vehicle trips which would normally be generated by the project commencing in 2006.
    - We recommend the project proponent consider include TDM measures that will encourage and promote the use of alternative transportation modes. Potential TDM measures may include, but are not limited to:
        - Rideshare vehicle loading areas
        - Vanpool vehicle accessibility and loading areas
        - On-site amenities such as cafeterias and restaurants, automated teller machines, and other services that would eliminate the need for additional trips.
        - Pedestrian oriented development, transit oriented development, and other non-traditional site designs.
        - Bus stop improvements.

Traffic Forecasting

The primary function of the Office of Forecasting is to provide critical project travel analysis of past, present and future traffic volumes, as well as other operational characteristics. After reviewing the TIA, we have the following comments:

Trip Distribution

- (Page 72): Exhibit 4-5: Project Only (Phase 2 Project Buildout: 2025) Traffic Volumes: The volumes for Intersection #4 (I-215 NB Ramps and Scott Road) show 80 AM trips and 53 PM trips accessing the Northbound onramp. The I-215 / Newport Road Interchange is only 3 miles away whereas Intersection #4 is 4.1 miles away. It would make more sense to head north and access the I-215 at Newport Road rather than Scott Road.

- We recommend amending the TIA to include the I-215 / Newport Road NB and SB ramps
- Additionally, please revise the trip distribution so that a larger number of northbound trips access the I-215 / Newport Road interchange.

Segment Analysis

- (Page 33) Please perform the basic freeway, merge, and diverge analysis in the Highway Capacity Software (HCS 7) Freeway "Facility" Module - *see image*

- The AM Peak Hour analysis was performed between 1 AM to 4 AM in the HCS 7 Analysis.
  - Please provide an explanation to clarify why this was done.
  - If it was a mistake, please correct and update.

We appreciate the opportunity to offer comments concerning this project. When this proposal is revised, please forward the appropriate information to this Office so that updated recommendations for impact mitigation may be provided. If you have any questions regarding this letter, please contact Kwasi Agyakwa at (909) 806-3955 or myself at (909) 383-4557 for assistance.

Sincerely,

MARK ROBERTS, AICP
Office Chief
Intergovernmental Review, Community and Regional Planning

APPENDIX 8.3

INITIAL STUDY

INITIAL STUDY

for

Change of Zone No. 1800007 (CZ1800007)
Plot Plan No. 180024 (PPT180024)
Tentative Tract Map No. 37439 (TTM37439)

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October 2018

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Appendix A: *Map My County.*

Appendix B: Site Photos, April 18, 2018.

Appendix C: *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018.

Appendix D: *Assembly Bill 52 (AB 52) Formal Notification (TTM 37439, CZ 1800007)*, prepared by County of Riverside, April 2, 2018.

Appendix E: *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018.

Appendix F: *Canterwood (Tentative Tract Map No. 37439) Greenhouse Gas Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018.

Appendix G1: *Phase I Environmental Site Assessment, for Tract 37439 and Channel Improvement APNs 466-120-019, 466-120-002, 466-120-022*, *466-310-026, 466-310-002,* prepared by RMA GeoScience, March 5, 2018.

Appendix G2: *Phase I Environmental Site Assessment Northwest Corner of APN 364-200-007,* prepared by RMA GeoScience, March 29, 2018.

Appendix H1: *Project Specific Water Quality Management Plan Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018.

Appendix H2: *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018.

Appendix I: *Canterwood (Tentative Tract Map No. 37439) Noise Impact Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018.

Appendix J: *Paleontological Resources Assessment Report Tentative Tract Map Number 37439,* prepared by CRM TECH, January 2, 2018.

Appendix K: *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis,* prepared by Urban Crossroads, Inc., June 5, 2018.

Appendix L1: *Water Supply Assessment Report, Canterwood Project,* prepared by Eastern Municipal Water District, February 21, 2018.

Appendix L2: *San 53* **(***Sewer and Water Availability) APNs 466-310-002, 466-310-026*, prepared by Eastern Municipal Water District, February 5, 2018.

Appendix M: *Design Manual Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., August 2018.

Commonly Used Abbreviations and Acronyms

A-1-5	Light Agriculture, 5-acre minimum
A-2	Heavy Agriculture
A-2-10	Heavy Agriculture, 10-Acre Minimum
A-P	Light Agriculture
AAQS	Ambient Air Quality Standards
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
AC	Acre
A.C.	Asphalt Concrete
ACM	Asbestos Containing Materials
ACOE	U.S. Army Corps of Engineers
ACS	US Census American Community Survey
Act	Alquist-Priolo Earthquake Fault Zoning Act
ADP	Area Drainage Plans
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
af	Acre-Feet
Afu	Undocumented Artificial Fill
AFY	Acre-Feet Per Year
AG	Agriculture
AIA	March Air Reserve Base/Inland Port Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AM	Morning
AMSL	Above Mean Sea Level
AOC	Area of Concern
APE	Area of Potential Effect
APN	Assessor's Parcel Number
APs	Area Plans
APS	Alternative Planning Strategy
AQ/GHG	Air Quality/Green House Gas
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plans
ARB	Air Resources Board
ARB Handbook	ARB Air Quality and Land Use Handbook
BAAQMD	Bay Area Air Quality Management District
BACMs	Best Available Control Measures
Basin	South Coast Air Basin

BAU	Business-As-Usual
BGS	Below Ground Surface
BMPs	Best Management Practices
BNSF	Burlington Northern Santa Fe
BP	Business Park
BUOW	Burrowing Owl
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Program
CalEEMod™	California Emissions Estimator Model™
Cal/EPA	California Environmental Protection Agency
CalFire	Riverside County Fire Department
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise
CAO	Cleanup and Abatement Order
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CBIA	California Building Industry Association
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CD	Community Development
CDC	California Department of Conservation
CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CD: MDR	Community Development: Medium Density Residential
CDO	Cease and Desist Order
CDOGG	California Division of Oil, Gas and Geothermal Resources
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System list
CESA	California Endangered Species Act
CETAP	Community Environmental Transportation Acceptability Program

CFR	Code of Federal Regulations
CH_4	Methane
CHHSLs	California Human Health Screening Levels
CHP	California Highway Patrol
CIP	Capital Improvement Program
CIWMP	Countywide Integrated Waste Management Plan
CLUP	Airport Land Use Compatibility Plan
CMA	Congestion Management Agency
CML&C	Concrete-Mortar Lined and Coated
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNUSD	Corona-Norco Unified School District
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COA	Conditions of Approval
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CR	Commercial Retail
CRA	Cultural Resources Assessment
CRDEH	County of Riverside Department of Environmental Health
CRMP	Cultural Resources Management Plan
CSA	County Service Area
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Federal Clean Water Act
CY	Cubic Yards
CZ	Change of Zone
dB	Decibel
dBA	A-Weighted Decibel
dBA CNEL	A-weighted decibel Community Noise Equivalent Level
dBA Leq	A-weighted decibel equivalent noise level
DBESP	Determination of Biologically Equivalent or Superior Preservation
DEIR	Draft Environmental Impact Report
DG	Decomposed Granite
DIF	Development Impact Fee
DMA	Drainage Management Area
DNL	Day/Night Average Sound Level

DOT	Department of Transportation
Dt	Domino Fine Sandy Loam, Saline-Alkali
DTSC	Department of Toxic Substance Control
DU	Dwelling Units
DU/AC	Dwelling Units Per Acre
Dv	Domino Silt Loam, Saline-Alkali
EAP	Existing Plus Ambient Growth Plus Project
EAPC	Existing Plus Ambient Growth Plus Project Plus Cumulative
ECC	Emergency Command Center
EDR	Estate Residential
EDR/RR	Estate Density Residential and Rural Residential
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMWD	Eastern Municipal Water District
EnA	Exeter Sandy Loam, 0 To 2 Percent Slopes
EO	Executive Order
EoB	Exeter Sandy Loam, Slightly Saline-Alkali, 0 To 5 Percent Slopes
EPA	Environmental Protection Agency
EpA	Exeter Sandy Loam, Deep, 0 To 2 Percent Slopes
EPD	Environmental Programs Department
EPS	Emission Performance Standard
ERCI	Emergency Responses, Complaints and Investigation
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
EwB	Exeter Very Fine Sandy Loam, 0 To 5 Percent Slopes
EyB	Exeter Very Fine Sandy Loam, Deep, 0 To 5 Percent Slopes
°F	Fahrenheit
FBFMs	Flood Boundary & Floodway Maps
FEMA	Federal Emergency Management Act
FHBM	Flood Hazard Boundary Map
FHWA	Federal Highway Administration
FIA	Fiscal Impact Analysis
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping & Monitoring Program
FPER	Fire Protection and Emergency Response Services
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
GHG	Greenhouse Gas
g/m3	Micrograms Per Cubic Meter

GMZs	Groundwater Management Zones
GP	General Plan
GPA	General Plan Amendment
gpd/ac	Gallons-Per-Day Per Acre
GPEIR	General Plan Environmental Impact Report
GWP	Global Warming Potential
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HAP	Hazardous Air Pollutants
HCD	Housing and Community Development
HCM	Highway Capacity Manual
HCOC	Hydrologic Conditions of Concern
HCP	Habitat Conservation Plan
HECW	High-Efficiency Clothes Washers
HETs	High-Efficiency Toilets
HFCs	Hydroflourocarbons
HPLV	High Pressure Low Volume
HOV	High-Occupancy Vehicle
HOA	Home Owners Association
HRA	Health Risk Assessment
HQTA	High Quality Transportation Area
HVAC	Heating, Ventilation, And Air Conditioning Units
HV/WAP	Harvest Valley/Winchester Area Plan
HWCL	Hazardous Waste Control Law
Hz	Hertz
I-15	Interstate 15
I-215	Interstate 215
IA	Implementing Agreement
IBC	International Building Code
IC/EC	Institutional Controls / Engineering Controls registries
ICLEI	International Council for Local Environmental Initiatives
IGR	Inter-Governmental Review
I-P	Industrial Park
IPCC	Intergovernmental Panel on Climate Change
IRAs	Identified Resource Areas
IS	Initial Study
IS/EA	Initial Study/Environmental Assessment
IS/NOP	Initial Study/Notice of Preparation
ITE	Institute of Transportation Engineers
JD	Jurisdictional Delineation

kW	Kilowatt
KWh	Kilowatt Hours
LAFCO	Local Agency Formation Commission
LBP	Lead Based Paint
LCA	Life-Cycle Analysis
LCC	Land Capability Classification
LE	Land Evaluation
LESA	Land Evaluation & Site Assessment
Leq	Equivalent Energy Level
LI	Light Industrial
LID	Low Impact Development
LLUMC-M	Loma Linda University Medical Center – Murrieta
LOS	Level of Service
LST	Localized Significance Thresholds
MAC	Municipal Advisory Council
March ALUCP	March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan
MBTA	Migratory Bird Treaty Act
MD	Medium Density Residential
MDP	Master Drainage Plan
MDR	Medium Density Residential
MFCS	Matthew Fagan Consulting Services
MGD	Million Gallons Per Day
MGPEIR	Murrieta General Plan Environmental Impact Report
MLD	Most Likely Descendent
MM	Mitigation Measure
MMT	Million Metric Tons
MOU	Memorandum of Understanding
MPH	Miles Per Hour
MPOs	Metropolitan Planning Organizations
MRZ	Mineral Resources Zones
M-SC	Manufacturing-Service Commercial
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MSL	Mean Sea Level
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalent
MUSD	Murrieta Unified School District
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District of Southern California
MWh	Megawatt-Hour
N_2O	Nitrous Oxide

NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCHRP	National Cooperative Highway Research Program Report
NDIR	Non-Dispersive Infrared Photometry
NEPA	National Environmental Policy Act
NEPSSA	Narrow Endemic Plants Survey Area
NEV	Neighborhood Electric Vehicle
NFIP	National Flood Insurance Program
NFRAP	No Further Assessment Planned Site List
NMTP	Non-Motorized Transportation Plan
NO_2	Nitrogen Dioxide
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO_X	Oxides of Nitrogen
NPDES	National Pollution Discharge Elimination System
NPL	National Priority List
NR	Noise Reduction
NRCS	Natural Resources Conservation Service
NPMS	National Pipeline Mapping System
NPS	Non-Point Source
O_3	Ozone
OAL	Office of Administrative Law
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OFP	Ozone Forming Potential
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OSC-70	Open Space and Conservation Policy 70
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Development
OS-R	Open Space - Recreation
OS-W	Open Space - Water
Pb	Lead
P-C	Production-Consumption
pc/mi/ln	Passenger Cars Per Mile Per Lane
PDA	Protector del Agua
PEIR	Program EIR

PeMS	Performance Measurement System
PFCs	Perfluorocabons
PHS	Preliminary Hydrology Study
PM	Afternoon
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	Respirable Particulate Matter
Ppb	Parts Per Billion
Ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PUHSD	Perris Union High School District
PVC	Polyvinyl Chloride
PV	Photovoltaic
Qoal	Older Alluvium
R-1	One Family Dwelling
R-4	Planned Residential
R-A	Residential Agriculture
R-A-5	Residential Agricultural - 5 Acre Minimum
RBBD	Southwest Road and Bridge Benefit District
RC	Rural Community
RC: EDR	Rural Community: Estate Density Residential
RCFC&WCD	Riverside County Flood Control and Water Conservation District
RCFD	Riverside County Fire Department
RCHCA	Riverside County Habitat Conservation Agency
RCIP	Riverside County Integrated Project
RCIT	Riverside County Information Technology
RC-LDR	Low Density Residential
RCLIS	Riverside County Land Information Systems
RCNM	Roadway Construction Noise Model
RCP	Reinforced Concrete Pipe
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RCTC	Riverside County Transportation Commission
RC-VLDR	Very Low Density Residential
RCWD	Rancho California Water District
REC	Recognized Environmental Condition
RHNA	Regional Housing Needs Assessment
RivTAM	Riverside County Transportation Analysis Model
RMS	Root Mean Squared

ROG	Reactive Organic Gases
ROW	Right-of-Way
R-R	Rural Residential
RDA	Redevelopment Agency
RTA	Riverside Transit Authority
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
RWRF	Regional Wastewater Reclamation Facility
SA	Site Assessment
SABER	Safeguard Artifacts Being Excavated in Riverside County
SARA	Superfund Amendments and Reauthorization Act
SARWQCB	Santa Ana Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCG	Southern California Gas Company
SCH	State Clearinghouse
SCHWMA	Southern California Hazardous Waste Management Authority
SC/MVAP	Sun City/Menifee Valley Area Plan (also SCMVAP)
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SFHA	Special Flood Hazard Area
SFP	School Facilities Program
SHMA	Seismic Hazard Mapping Act
SHS	State Highway System
SKR	Stephen's Kangaroo Rat
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations and Cleanup
SO2	Sulfur Dioxide
SO_X	Oxides of Sulfur
SMARA	The Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SO_2	Sulphur Dioxide
SO_x	Sulphur Oxides
SoCAB	South Coast Air Basin

SOP	Standard Operating Procedures
SP	Specific Plan
Sq. Ft.	Square Feet
SR-74	State Route 74
SRA	Source Receptor Area
STC	Sound Transmission Class
s/v	Seconds Per Vehicle
SWFP	Solid Waste Facility Permit
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
SZ	Scientific Resource Zone
TAC	Toxic Air Contaminant
TCAP	Temescal Canyon Area Plan
TCP	Traffic Control Plan
TCR	Tribal Cultural Resource
TDS	Total Dissolved Solids
TIA	Traffic Impact Analysis
TIS	Traffic Impact Study
TLMA	Transportation Land Management Agency
Tpd	Tons per day
TSD	Treatment, Storage and Disposal facility list
TTCP	Traditional Tribal Cultural Places
TTM	Tentative Tract Map
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code
ULFT	Ultra-Low-Flush Toilets
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
V/C	Volume to Capacity
VCP	Vitrified Clay Pipe
VEC	Vapor Encroachment Condition

VES	Vapor Encroachment Screen
VLF	Vehicle License Fee
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VPD	Vehicles Per Day
VWRPD	Valley Wide Recreation and Park District
Wd	Waukena Loam, Saline-Alkali
WDL	Water Data Library
WDR	Waste Discharge Requirement
WMD	Waste Management Department
WMWD	Western Municipal Water District
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Council of Governments
WRP	Waste Recycling Plan
WSA	Water Service Agreement
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan
WSP	Water Supply Plan

COUNTY OF RIVERSIDE
ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY

Project Case Type (s) and Number(s): Change of Zone No. 1800007; Plot Plan No. 180024; and Tentative Tract Map No. 37439.
Lead Agency Name: County of Riverside Planning Department
Address: P.O. Box 1409, Riverside, CA 92502
Contact Person: Russell Brady, Project Planner
Telephone Number**:** 951.955.3025 or rbrady@rivco.org
Applicant's Name: Sun Holland, LLC
Applicant's Address: 27127 Calle Arroyo, #1910, San Juan Capistrano, CA 92675

I. PROJECT INFORMATION

Project Description:

1. Overview

The proposed Project includes Change of Zone No. 1800007 (CZ 1800007), Plot Plan No. 180024 (PPT180024), and Tentative Tract Map No. 37439 (TTM 37439), as well as off-site roadway, drainage, and sewer improvements to serve the Project.

The analysis in this Initial Study (IS) focuses on two (2) specific Project components:

- The "Residential Project site" components, which are covered under CZ 1800007, PPT180024, and TTM 37439, and are located west of Eucalyptus Road; north of Craig Avenue; east of Leon Road; and south of Holland Road; and
- The "Off-site Project components" which consist of the following:
  - 10,850 linear feet of 33" and 30" diameter sewer line, which will be approximately 15 feet in depth and will extend from Leon Road midway between Holland and Craig Roads, then proceed 5,780' northwesterly within an Eastern Municipal Water District easement on separately owned property to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW to Tres Lagos Drive, then proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.
  - 5,300 linear feet of roadway improvements installed along Holland Road with 8 to 10 foot wide depressed shoulders. No curb, gutter, sidewalks, or streetlights shall be installed. Roadway improvements will be south of the San Pedro Farms Project (TTM 36467), known as Assessor Parcel Number 466-030-002.
  - Temporary Drainage Channels: A total of five (5) temporary drainage channels will be provided for the Project. These are located along Craig Avenue and Eucalyptus Road ROWs. Another temporary drainage channel is located north of Holland Road on the San Pedro Farms property.
  - The Project has several regional flood control channels that are proposed for the Project that are both within and outside the Project boundary. **Exhibit A, *Menifee Valley ADP Ultimate Flood Control Drainage System*** identifies the facilities that are expected to be included with other facilities into a future Menifee Valley Master Drainage Plan/Area Drainage Plan (MDP/ADP) that will be prepared by the Riverside County Flood Control and Water Conservation District (RCFC&WCD). The MDP will include the regional flood control facilities needed to address the primary flooding issues within the watershed. The ADP will provide a funding mechanism for the regional facilities based on development

fees collected within the adopted ADP. The potential MDP/ADP facilities included with the Project are described in further detail as follows:

1. A 620 foot long 14' by 8.5' box culvert that crosses Briggs Road and will drain into a Lake/Channel system proposed as part of Tract Map 31229. Please note that Tract map 37439 will have to construct the lake/channel system that bisects Tract Map 31229. However, this channel will not be part of the future MDP/ADP since it is in the City of Menifee.
2. The relocation of three high pressure gas lines that are 16", 24", and 30" in diameter for the installation of the box culvert crossing Briggs Road.
3. A trapezoidal earthen channel (Holland Channel) with a length of 5,400 feet that extends from Briggs Road to Leon Road. The channel will have an average bottom width of 100 feet and average depth of 8.5 feet. The channel will implement 4:1 side slopes and two access roads resulting a total approximate width of 250 feet. This channel will require 230,000 cubic yards of material to be excavated.
4. A 450 foot long and 300 foot long 14' by 7' two reinforced concrete box (RCB) culvert system that crosses Leon Road.
5. A trapezoidal earthen channel (Line A) with a length of 3,300 feet that extends from Leon Road at the downstream terminus will extend in a southeasterly direction toward the intersection of Craig Avenue and Eucalyptus Road. The channel will have an average bottom width of 50 feet and average depth of 7 feet. The channel will implement 4:1 side slopes and two access roads resulting in a total approximate width of 146 feet. This channel will require 67,000 cubic yards of material to be excavated.
6. A 200 foot long 8' by 6' two RCB culvert that extends from Line A and crosses Eucalyptus Road to intercept offsite flows from the southeasterly part of the watershed area. Two 48" reinforced concrete pipe (RCP) storm drains are proposed to collect flows near Craig Avenue and Eucalyptus Road and connect to the RCB.
7. A trapezoidal earthen channel (Line B) with a length of 1,100 feet that extends north from the proposed Holland Channel at Leon Road adjacent to the easterly right-of-way of Leon Road. The channel downstream terminus will begin at Leon Road and extend to the north side of Holland Road. The channel will have an average bottom width of 30 feet and average depth of 7 feet. The channel will implement 4:1 side slopes and two access roads. This channel will require 17,000 cubic yards of material to be excavated.
8. A 1,000 foot long 84" RCP that extends from the proposed Line A Channel north along Eucalyptus Road is proposed in order to intercept offsite flows from a watershed area that extend northeasterly of the Eucalyptus Road Holland Road intersection.
9. A 2,000 foot long 54" RCP extending from the RCB crossing Leon Road toward will be required to intercept the offsite flows from a watershed area southeast of the Leon Road and Craig Avenue intersection. The storm drain will be located within Leon Road and extend 900 feet east along Craig Avenue.
10. A 200 foot long double 8' x 6' RCB extending north from the proposed Line B Channel and crossing Holland Road. The culvert will intercept the offsite flows northwest of the Leon Road and Holland Road intersection.

Collectively, these Project components comprise the "Project," and are discussed in greater detail, below. Reference **Exhibit A, *Menifee Valley ADP Ultimate Flood Control Drainage System*, Figure 1, *Vicinity Map***, **Figure 2, *Aerial Photo with Project Components***, and **Figure 3, *Assessor's Parcel Map*** for the locations of the Residential Project site components and the Off-site Project components.

Exhibit A
Menifee Valley ADP Ultimate Flood Control Drainage System

SHEET 1 OF 1

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

MENIFEE VALLEY AREA DRAINAGE PLAN

Source: JLC Engineering, July 2018

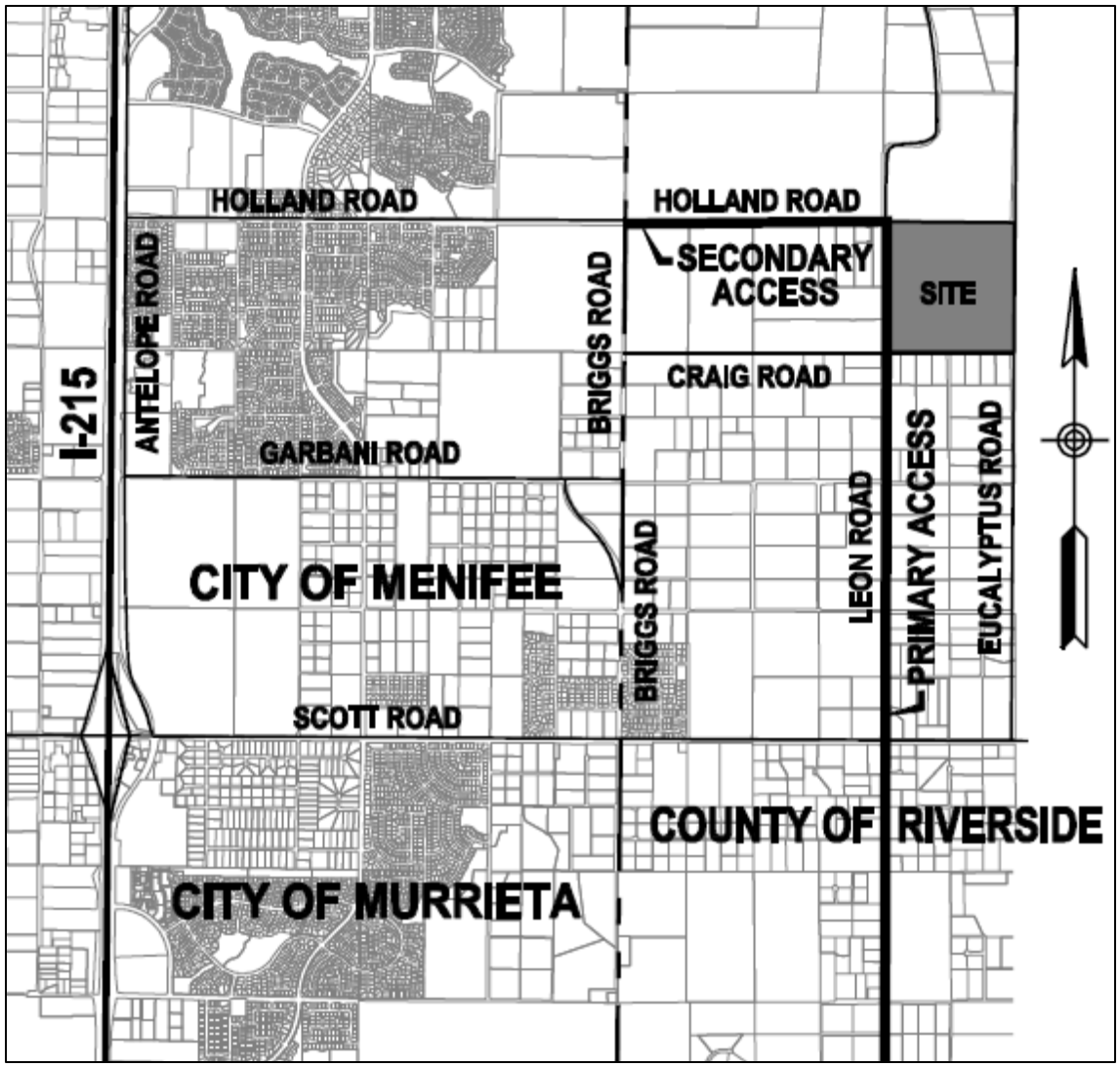
LEGEND:

CULVERT SYSTEMS

CHANNEL

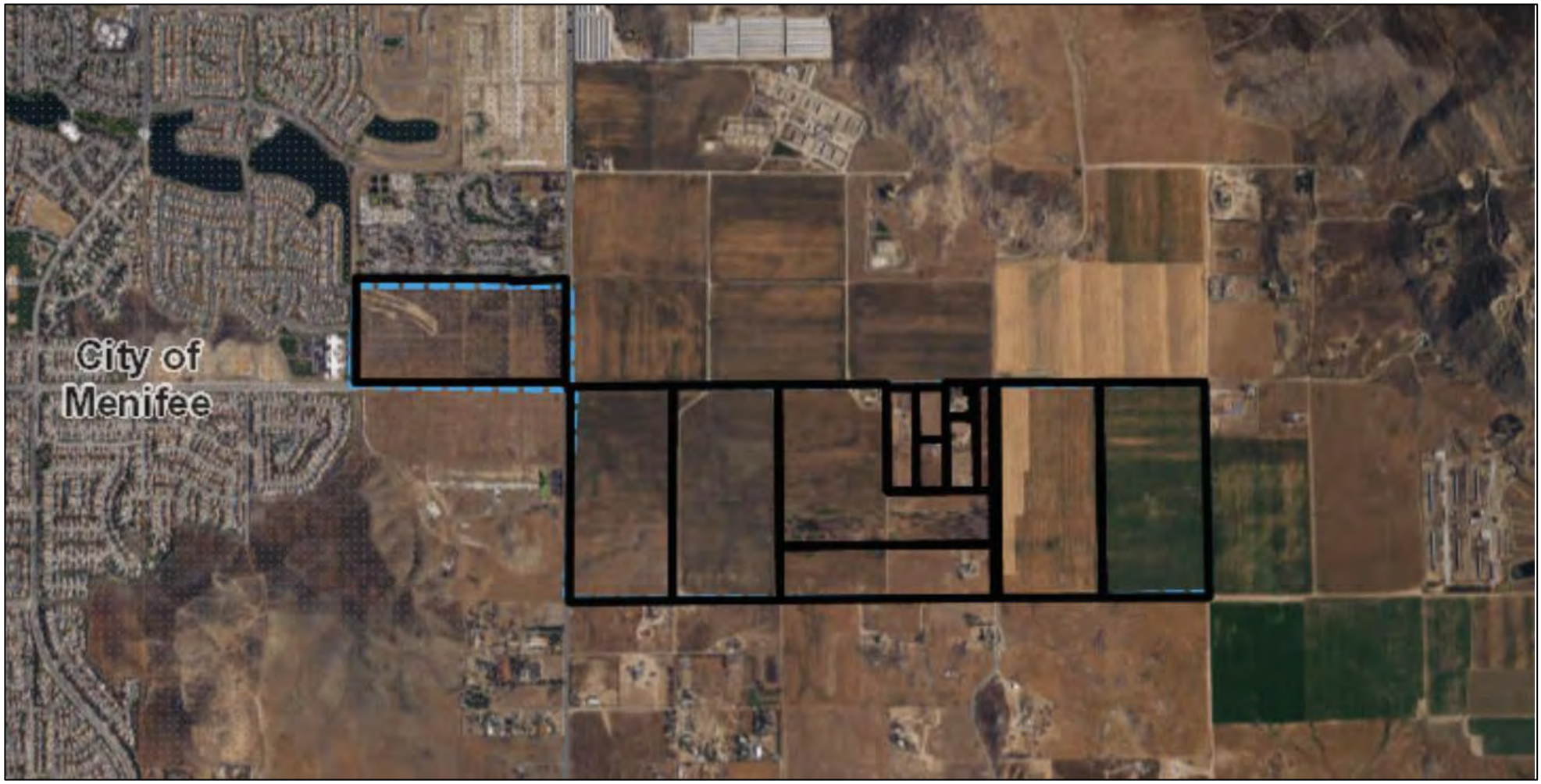
STORM DRAIN SYSTEMS (NOT PART OF MDP)

Figure 1
Vicinity Map



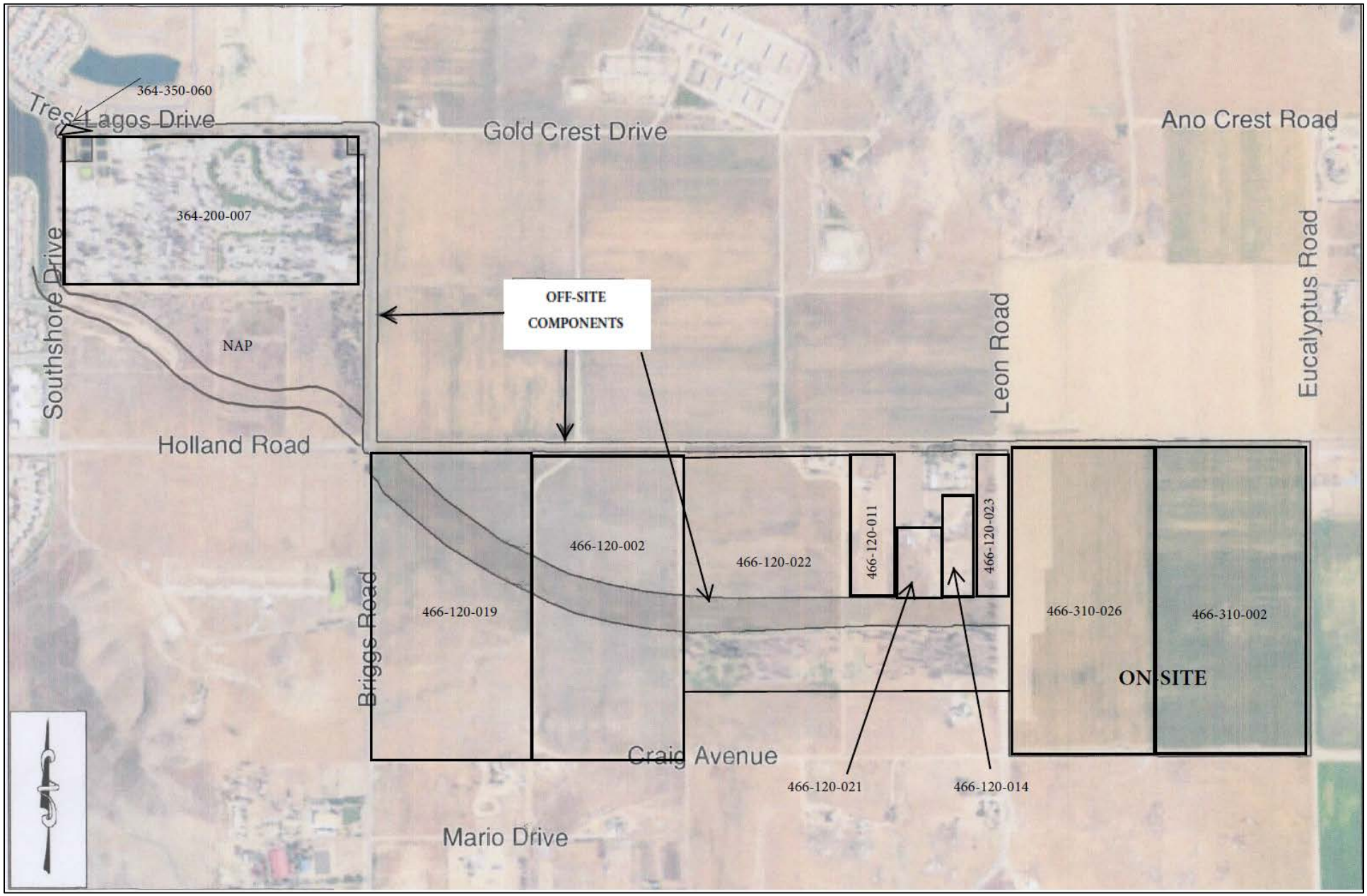
Source: Canterwood TTM 37439 Exhibit, March 2018

Figure 2
Aerial Photo with Project Components



Source: Map My County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public accessed 2018

Figure 3
Assessor's Parcel Map



Source: Map My County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public accessed 2018

2. Residential Project Site Components (Only)

a. CZ 1800007

The current zoning classification on the residential Project site is R-1 (One-Family Dwellings). CZ 1800007 proposes to change the zoning classification on the entire residential Project site of 158.18 gross acres from R-1 to R-4 (Planned Residential). Reference **Figure 4*, CZ 1800007***.

b. TTM 37439

TTM 37439 proposes a subdivision of 158.18 gross acres into 574 single-family residential lots, 25 open space lots, 9 drainage basin lots, and 45.6 acres of Project roadways. Reference **Table 1, *TTM 37439 Specifics***, below. Canterwood includes four (4) individual neighborhoods, with minimum lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft.

Lot 575 is an 8.96-acre park with the following amenities: baseball field, soccer fields (2), basketball court, tot lot, picnic shelter, restroom, and parking. Lots 576, 579, 580, 582, 591, 594, and 604 are mini-parks/paseos.

The density of TTM 37439 is 3.6 dwelling units/acre. Reference **Figure 5*, TTM 37439***. It is anticipated that TTM 37439 will be recorded in 4 phases.

Table 1
TTM 37439 Specifics

Type	Area (acres)	Number of Lots
Residential	79.54	574
Open Space	25.81	25
Drainage Basins	7.23	9
Project Roadways	45.60	--
TOTAL	**158.18**	**608**

Source: TTM 37439, March 15, 2018.

c. PPT 180024

A total of 574 single-family residential lots are proposed. Canterwood includes four (4) individual neighborhoods, with minimum lots sizes of 4,700 sq. ft., 5,000 sq. ft., 5,500 sq. ft., and 6,500 sq. ft. Five (5) architectural styles have been provided. A minimum of four (4) architectural elevations and three (3) floor plans are required for each neighborhood comprised of 50 or more homes.

The centerpiece of the community is a minimum 8.96-acre community park located in northwest portion of the Project. Canterwood also features landscape buffers, passive open space areas, ten (10) paseos, and approximately 13,264 linear feet (LF) of trails/paseos and 56,417 LF of public street sidewalks. The minimum 8.96-acre community park provides a variety of active recreational amenities for Canterwood residents and the general public. Active recreational amenities within the community park shall include, at a minimum, the following:

- Lighted ball field;
- Lighted soccer fields;
- Half-court basketball;
- Tot lot;

- Open turf play area(s);
- Picnic area with shade;
- Seating area(s);
- A restroom building; and
- Parking.

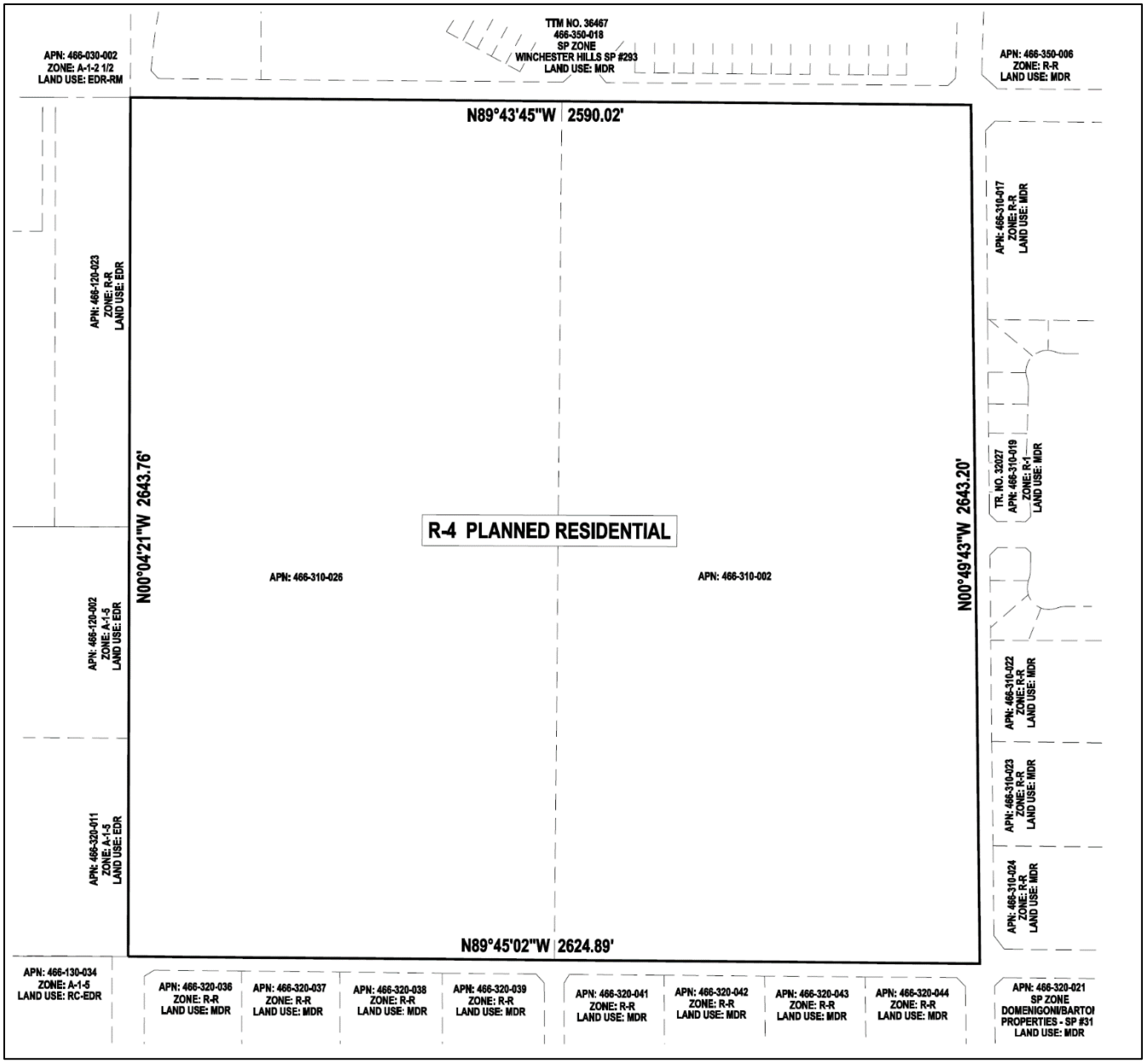
Canterwood includes a comprehensive, interconnected public trail and walkway system that provides residents and visitors with convenient access to the on-site community park and open space. Drainage Channels (Lots 577, 581, and 588) will be flanked on either side by a 16' wide maintenance road/hiking trail (Regional Trail), as well as 3-rail vinyl fencing on the channel side and tubular steel fencing on the outside edge of the trail. Sidewalks will be provided along all Project streets, as well as within the paseos.

Parking will be provided with two car attached garages for each home as well as on-street parking spaces. All homes are designed with driveways, which can also provide parking for additional vehicles, which would assist in minimizing the use of the parking spaces on the private street by residents and guests.

The Project is bordered by Leon Road, Holland Road, Eucalyptus Road, and Craig Avenue. Access to the proposed Project may be taken via any of these streets. Please see Subsection 3.d. Circulation, below, for more details on Project roadways and circulation.

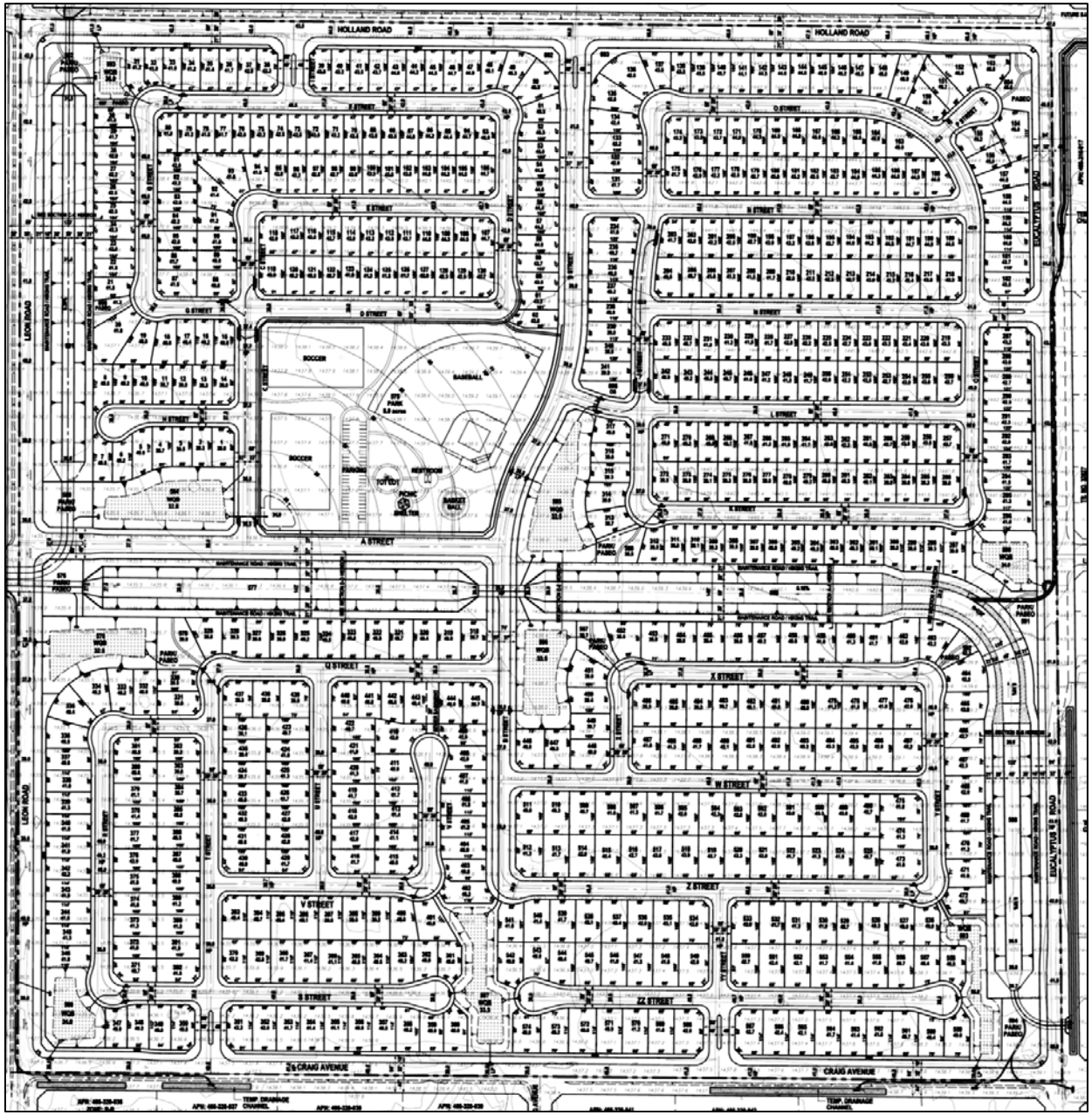
Refer to *Design Manual - Canterwood (Change of Zone No. 1800007, Plot Plan No. 180024, and Tentative Tract Map No. 37439),* prepared by Matthew Fagan Consulting Services, Inc., August 2018 (**Appendix M**) for overall guidelines and additional Plot Plan information.

Figure 4
CZ 1800007



Source: Canterwood Change of Zone Exhibit, March 2018

Figure 5
TTM 37439



Source: Canterwood TTM 37439 Exhibit, March 2018

3. Both Residential Project Site Components and Off-Site Project Components

a. Project Grading

The Project rough grading will involve approximately 175,811 cubic yards (CY) of cut and 418,339 CY of fill. Lot spoil dirt from house foundations, wall footings, driveways, and utilities will generate approximately 72,000 CY of cut. Excavation to create the off-site Holland Channel will generate the remaining 170,528 CY of dirt needed to balance the site.

The site currently ranges in elevation from approximately 1,434 feet above mean sea level (AMSL) on the western side of the Project site to 1,445 AMSL in the northeastern corner of the site.

When graded, the Project will range in elevation from a high of 1,447 AMSL at the intersection of Holland Road and Eucalyptus Road to a low elevation of 1,427 AMSL at the bottom of the Holland Channel where it crosses Leon Road. This demonstrates that the range of site elevation variations will widen from 11' to 20' to facilitate the development of the Project. In order to accomplish this, graded slopes will be utilized to form the graded drainage channel that traverses the central and southeastern portions of the site. Perimeter streets on all four sides will match the grade of surrounding properties and projects. Reference **Figure 6*, TTM 37439 Conceptual Grading Plan***.

As described previously and as shown on **Exhibit A**, the Project will construct a total of three regional flood control trapezoidal earthen channels (i.e. Holland Channel, Line A, and Line B) and underground storm drains that are expected to be included as part of a future Menifee Valley Master Drainage Plan (MDP) and Area Drainage Plan (ADP) to be prepared by Riverside County Flood Control and Water Conservation District. The earthen trapezoidal channels within the Project limits (Lines A and B) will discharge via an underground reinforced concrete box (RCB) culvert crossing Leon Road to an offsite earthen trapezoidal channel (Holland Channel) that will extend from Leon Road and connect to a proposed RCB culvert crossing Briggs Road. The proposed culvert, which is a five barrel 14' wide x 8.5' high reinforced concrete box, crosses Briggs Road and discharges into the Lake/Channel system within approved Tentative Tract 31229. Tentative Tract 31229 has been approved by the County of Riverside and the City of Menifee. Tentative Tract 31229 proposes to construct a private lake/channel system which will accept flows from the proposed culvert. The proposed lake system varies in width from 150 feet to 425 feet. Tentative Tract Map 37439 will construct the proposed regional flood control channels including the trapezoidal earthen channels and RCB/RCP systems shown on **Exhibit A, *Menifee Valley ADP Ultimate Flood Control Drainage System***. There are three total regional trapezoidal earthen channels (i.e. Holland Channel, Line A and Line B) to be constructed by Tentative Tract Map 37439. The total length of the three channels are approximately 9,800' in length and will require approximately 314,000 cubic yards of excavation. The trapezoidal earthen channels will have 4:1 side slopes, depths varying from 6'-8', and a bottom width that varies from 30' to 100'.

The Project will also require off-site grading for the sewer lift station, which will create a level pad, approximately 160' wide by 130' long. The overall grading footprint, including perimeter slopes, will be approximately 230' wide and 160' long. The proposed grading will involve fill thicknesses ranging from 0' to 15' and approximately 6,500 cubic yards of fill, which will be trucked in from the Project site.

Off-site grading associated with street improvements for Holland Road, between Leon Road and Briggs Road, will involve minor street grading (cut or fill thicknesses less than 2') for a graded

width of approximately 58' and a length of 5,275'. Overall earthwork volume is estimated to be 6,000 CY, which will also be trucked in from the Project site.

b. General Construction Assumptions

According to the *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis* (*AQ Analysis*), prepared by Urban Crossroads, dated August 8, 2018, general construction assumptions, as well as the number and types of construction equipment needed, have been assumed for the Project. These are contained in **Table 2a, *TTM 37439 Construction Duration***, and **Table 2b, *TTM 37439 Construction Equipment*,** below.

Table 2a
TTM 37439 Construction Duration

Phase Name	Start Date	End Date	Days
Phase 1			
Site Preparation	4/1/18	6/22/18	60
Grading	6/23/18	1/25/18	155
Building Construction[1]	1/26/19	12/10/21	750
Paving	7/31/21	12/31/21	110
Architectural Coating	7/31/21	12/31/21	110
Phase 2			
Site Preparation	1/1/22	2/25/22	40
Grading	2/26/22	7/29/22	110
Building Construction[1]	7/30/22	11/15/24	600
Paving	11/16/24	2/28/25	75
Architectural Coating	3/1/25	6/13/25	75

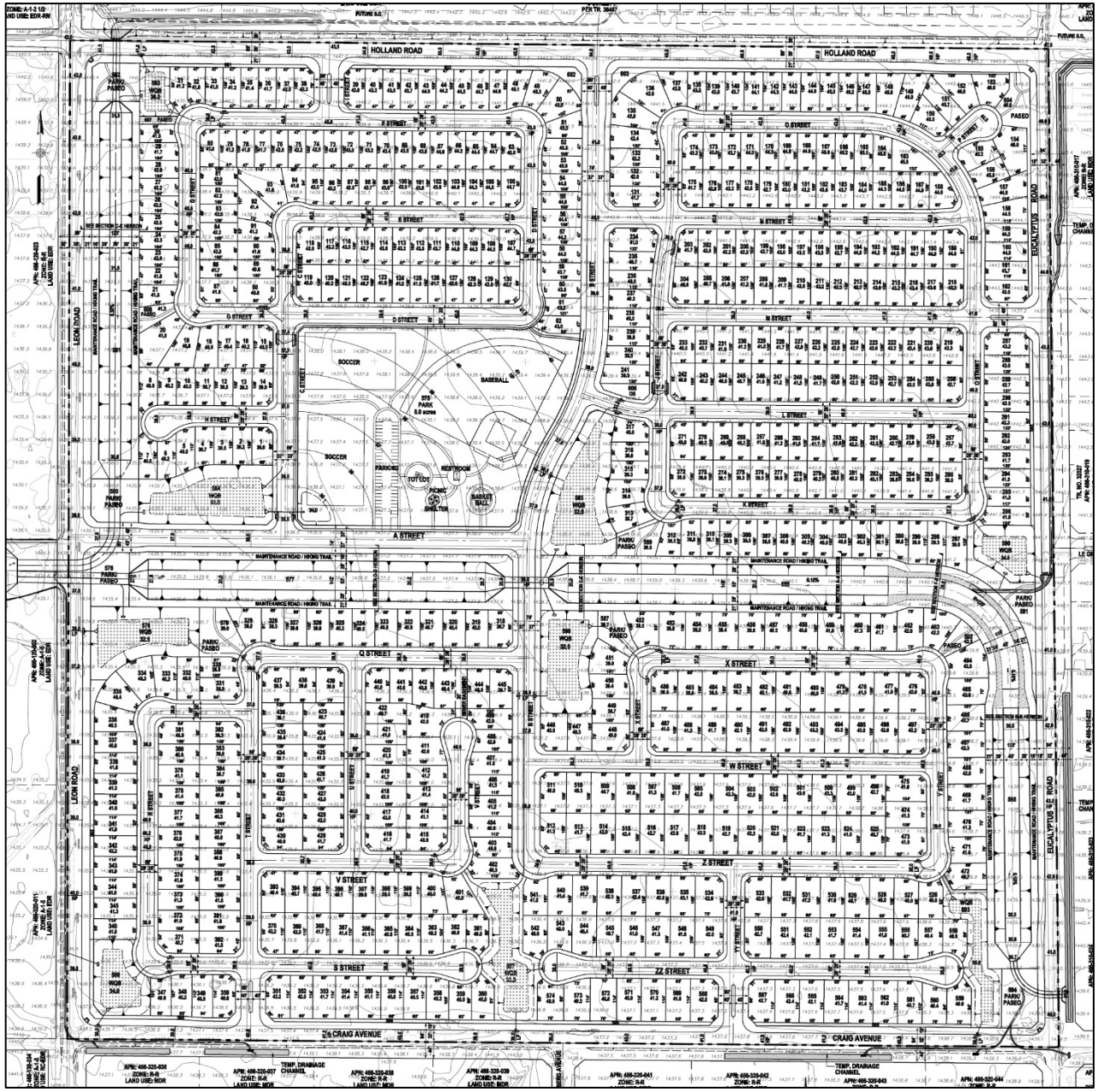
Source: *AQ Analysis* (**Appendix C**)
[1] The number of days for Building Construction was reduced by 2; therefore, the amount of equipment was increased by 2 for both Phases 1 and 2.

Table 2b
TTM 37439 Construction Equipment

Activity	Equipment	Number	Hours per Day
	Phase 1 and 2		
Site Preparation	Rubber Tired Dozers	3	8
	Tractors/Loaders/Backhoes	4	8
	Excavators	2	8
	Graders	1	8
Grading	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Tractors/Loaders/Backhoes	2	8
	Cranes	2	8
	Forklifts	6	8
Building Construction	Generator Sets	2	8
	Tractors/Loaders/Backhoes	6	8
	Welders	2	8
	Paving Equipment	2	8
Paving	Rollers	2	8
	Pavers	2	8
Architectural Coating	Air Compressors	1	8

Source: *AQ Analysis* (**Appendix C**)

Figure 6
TTM 37439 Conceptual Grading Plan



Source: Canterwood TTM 37439 Exhibit, March 2018

c. Drainage / Hydrology / Water Quality

The Project will construct two large channels that will traverse the Project, as well as subsurface storm drain and bioretention basins. The bioretention basins will treat for water quality purposes, and discharge directly into one of the two channels. The Project site is not required to address the hydrologic conditions of concern or mitigate for increased runoff since the Project will construct the Holland Channel from Eucalyptus Avenue to Southshore Drive (which has an existing culvert that discharges into private lakes and ultimately to Salt Creek).

The Project site will construct the proposed Holland Channel (designated as Line A through the Project site) and Line B. The Holland Channel will be constructed from Eucalyptus Avenue to the existing culvert at Southshore Drive. This system will be a combination of box culverts and open channels that will be engineered, unlined channels and will be maintained by RCFC&WCD. This system will discharge into a system that is designated as exempt from addressing the hydrologic conditions of concern per the Riverside County Stormwater & Water Conservation Tracking Tool (http://rivco.permitrack.com/). Therefore, since the Project is constructing an extension from this location to the Project site of a facility that is also engineered, unlined, and maintained, the Project site will not create a hydrologic condition of concern.

The Project site is relatively flat, with the main channel having slopes of 0.1% to 0.3% throughout the Project site. Due to the vertical constraints, the bioretention basins were limited to 18" of soil media, and the majority of the storm drain systems have slopes of 0.3%.

The off-site hydrology analysis utilized the ultimate condition land use to perform the analysis, since these flow rates would be used for the design of the Line A (Holland Channel) and Line B channel infrastructure systems. The offsite area consists of 6 watershed areas designated as Areas "A" through "F". Reference **Figure 7, *Ultimate Condition Off-Site Hydrology Map***. The post-project condition onsite rational method hydrology analysis was performed for the 9 watershed areas, designated as areas "A" through "I". Areas "A" through "I" are the in-tract areas that include the half-street improvements within the perimeter streets surrounding the residential development. The area designations correspond to the downstream tributary basin. The rational method analysis utilized condominium land use (65% impervious) for the Project based upon the average lot sizes, and the basin areas were analyzed as 100% pervious. Reference **Figure 8, *Post Project Condition – On-Site Hydrology Map***.

The Project site will construct subsurface storm drain that will connect to two main channels traversing the Project site. During the preliminary stages, only the main channels (Lines A and B) include Water Surface Profile Gradient Program calculations. The remaining storm drain systems utilized friction slope calculations to size the systems. Systems connecting to Lines A and B utilized downstream water surface elevations obtained from the WSPG calculations. Systems discharging into the onsite basins utilized the 100-year water surface elevations determined by the basin outlet sizing calculations. The laterals utilized the water surface elevations determined by the mainline friction slope calculations. Reference **Figure 9, *Drainage Facilities Map***.

In addition to the Line A and Line B system, which are expected to be incorporated into a future MDP/ADP, three drainage system systems are required to collect offsite flows that enter the Project. These facilities will not be part of the future MDP/ADP and have been designated as Lines 1, 2 and 3. Line 1 connects to the double box system crossing Leon Road (Line A). It collects flows from Basin I, as well as the offsite area tributary to the south east corner of the Leon Road and Craig Avenue Intersection. The system ranges from 54" – 60", with a peak flow rate of 109 cubic feet per second (ft^3/s). The Line 2 and Line 2A system connects to Line A at

the upstream end (to the double box culvert crossing Eucalyptus Road). The system collects flows tributary to the south side of Craig Avenue at the east and west intersections of Craig Avenue and Eucalyptus Road. The pipe size ranges from 60" – 66", with a peak flow rate of 153 ft^3/s. The Line 3 system collects flows tributary to the north east side of Eucalyptus Avenue and connects to the trapezoidal channel of the Line A system. Line 3 consists of a 6' high x 8' wide box culvert and an 84" RCP storm drain, and has a peak flow rate of 180 ft^3/s. The upstream box culvert of the Line A system was also analyzed, since the preliminary WSPG for the Line A system ended at the transition of the trapezoidal channel to the box culvert. Therefore, a friction slope analysis was performed for the upstream box portion.

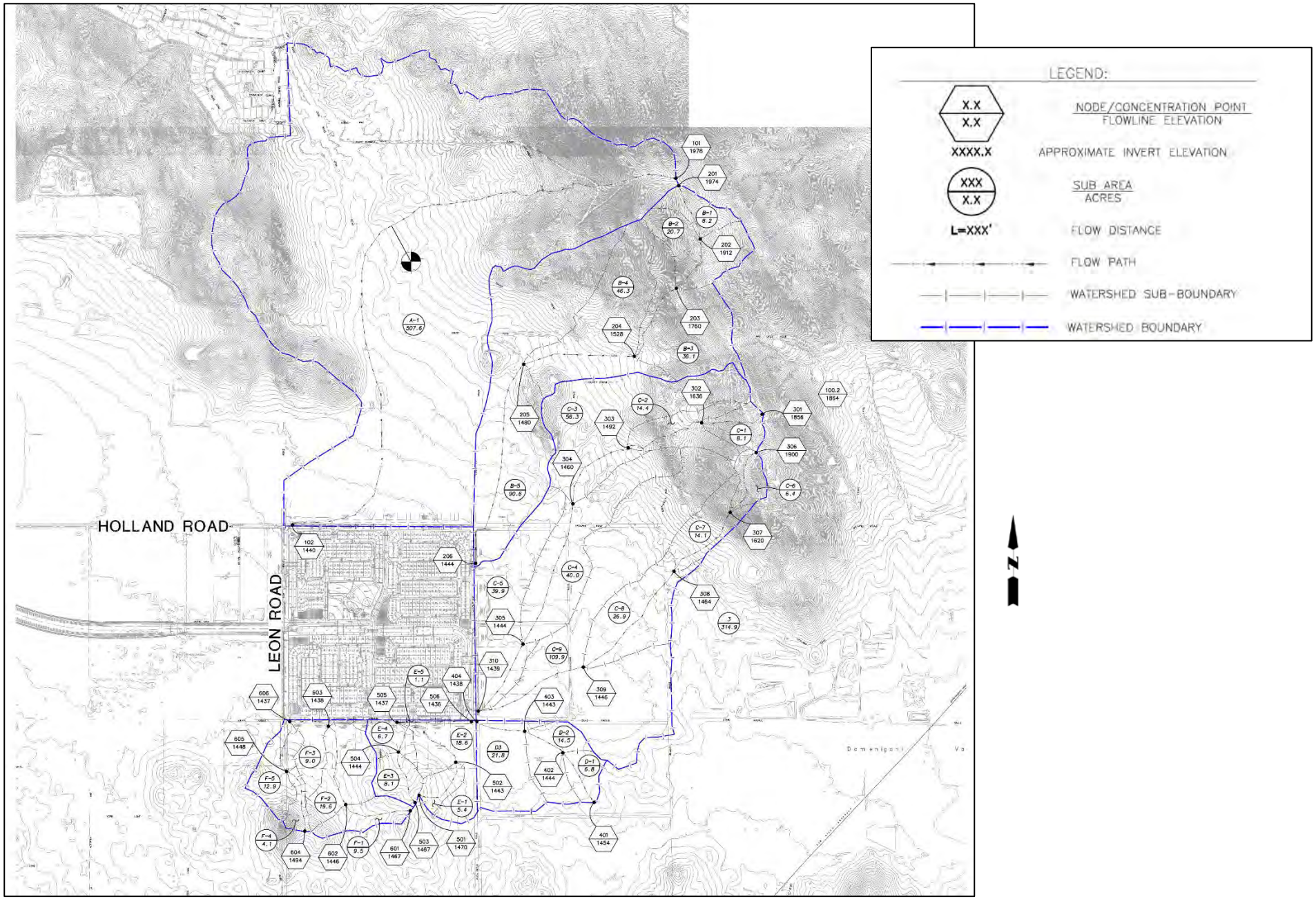
The onsite storm drain systems were analyzed starting with the basin outlet pipes. The upstream water surface elevation for the basin outlet pipes were used to determine the weir flow line elevation. This weir flow line elevation could not be lower than 0.5 feet above the top of soil media within the basin to ensure that the water quality volume did not bypass the bioretention treatment. The basin outlet structures were then sized for the 100-year flow rate (as determined by the rational method hydrology calculations). The preliminary outlet structures were sized using the weir equation, and a weir coefficient equal to 3. The ponded depth of the 100-year flow rate on the outlet weirs was utilized as the downstream water surface elevation for the storm drains discharging into the basins.

The Project site will utilize bioretention basins to treat for water quality purposes. **Figure 10, *WQMP Site Plan.*** The required water quality volume was determined by using the Santa Ana Watershed Best Management Practices Design Volume Spreadsheets. The effective impervious fraction was calculated based upon the tributary land use designations.

The bioretention basins have been designed so that the water quality volume will not pond higher than 6" above the soil media using the Bioretention Basin Design Spreadsheets. Flows in excess of the water quality volume will be conveyed through outlet structures within the basins that incorporate weir structures with flow line inverts at 6" above the soil media. The Riverside County Bioretention Facility – Design Procedure worksheets were utilized to size the Bioretention Basins, however, the bioretention basins are not rectangular shaped bioretention basins but are irregular shaped so the top width is the average width of the basins. All the bioretention basins have 18" of soil media and a minimum 12" of gravel due to the vertical constraints associated with the channel elevations traversing the Project. The bio-retention basins proposed for the Project are to be maintained by the County Facilities District (CFD) that will be formed as part of the Project approval process. All onsite flows will discharge into the proposed channels that will be a part of the future MDP/ADP that will be owned and operated by RCFC&WCD. These proposed channels traverse the Project site and provide the area with regional flood protection.

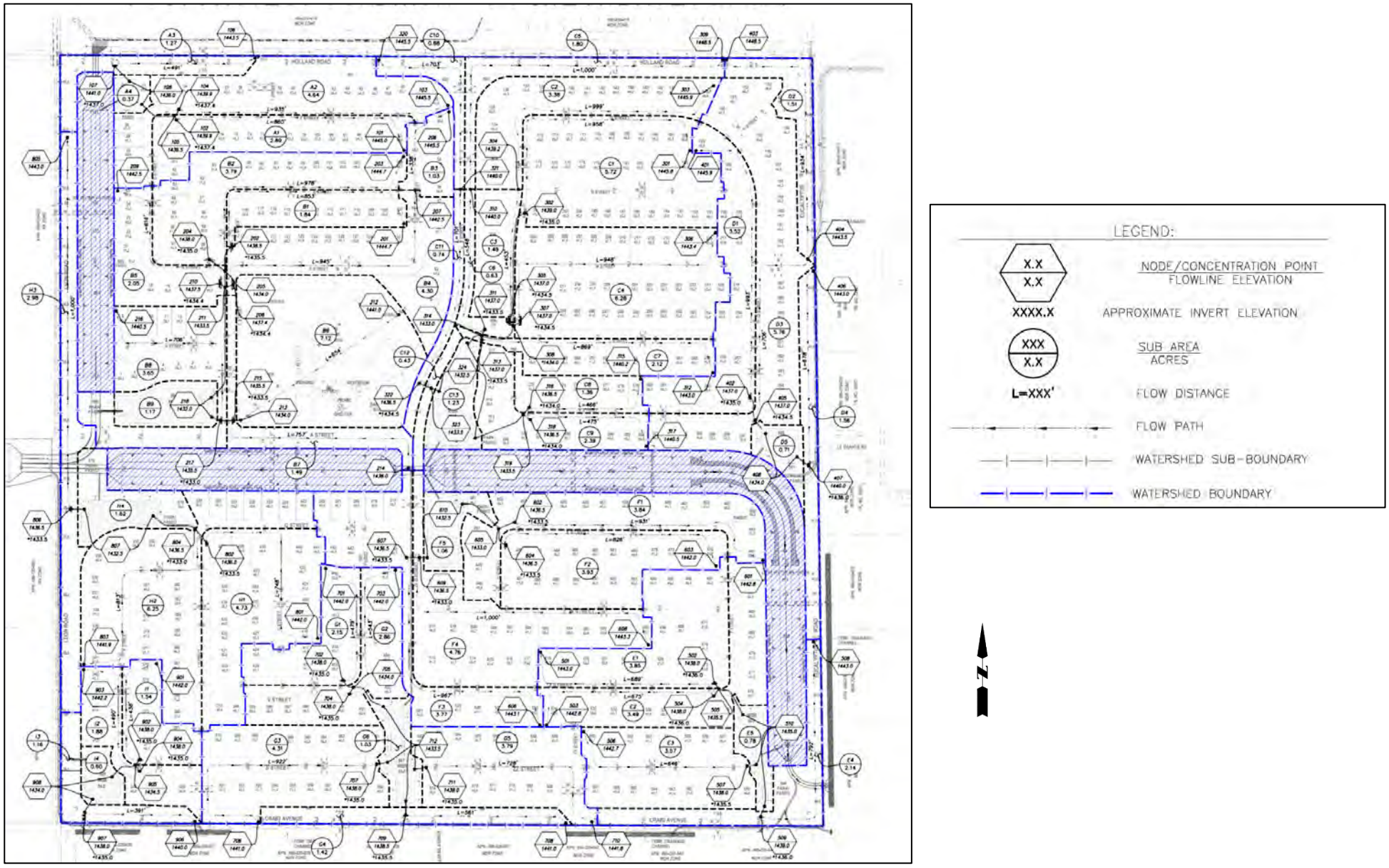
Since the Project will be required to construct the proposed regional flood control channel to the existing lake system in Menifee, the Project site will be exempt from addressing the 1 Hydrologic Conditions of Concern (HCOCs). This is a result of the Project having flood control facilities that will be engineered and maintained systems from the Project site to Canyon Lake.

Figure 7
Ultimate Condition Off-Site Hydrology Map



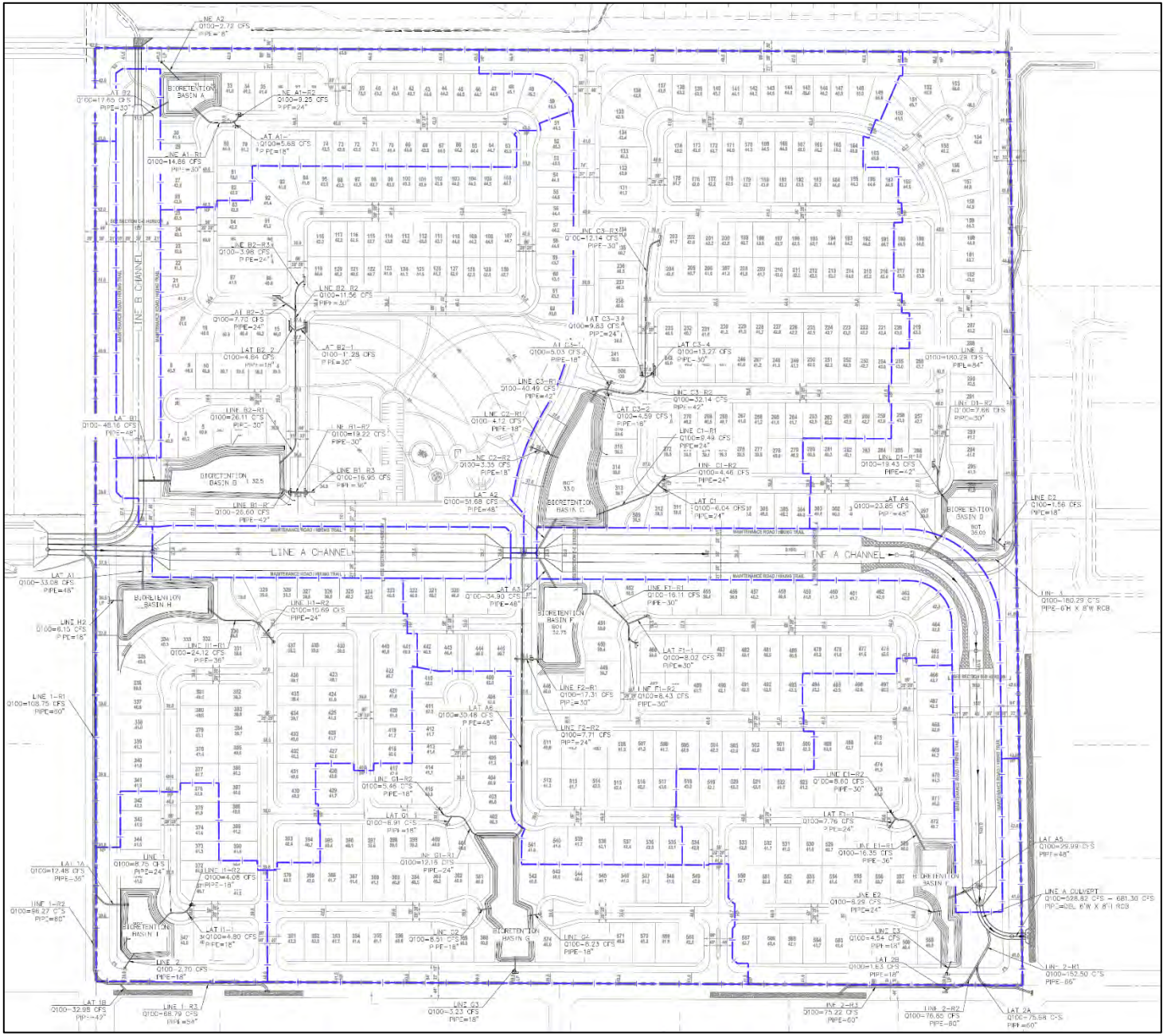
Source: Canterwood Hydrology Report March 2018 (**Appendix H2**)

Figure 8
Post Project Condition – On-Site Hydrology Map



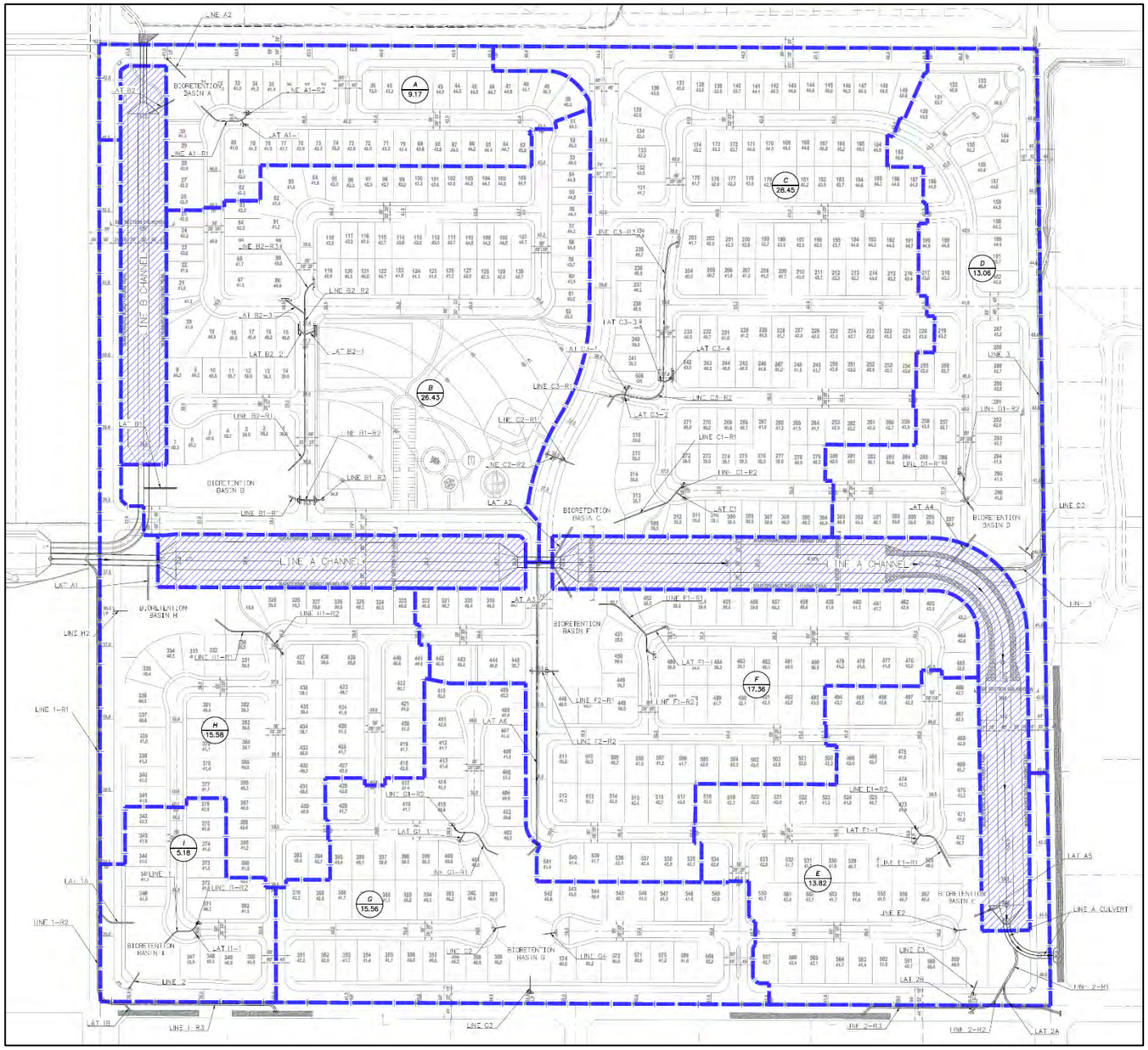
Source: Canterwood Hydrology Report March 2018 (**Appendix H2**)

Figure 9
Drainage Facilities Map



Source: Canterwood Hydrology Report March 2018 (**Appendix H2**)

Figure 10
WQMP Site Plan



Source: Canterwood WQMP Report September 2017 (**Appendix H1**)

d. Circulation

The following are descriptions of the Riverside County General Plan Roadway Network, and existing conditions and proposed improvements for the Project as depicted in the *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis* (*TIA*), prepared by Urban Crossroads, dated March 14, 2018. Reference **Figure 11, *Existing Number of Through Lanes and Intersection Controls***, and **Figure 12, *Riverside County General Plan Roadway Network***.

- Holland Road

Holland Road is classified as a "Major Highway" on the Riverside County General Plan Roadway Network. According to **Figure 13, *Riverside County General Plan Roadway Cross-Sections***, a Major Highway is a 4-lane roadway with a 118' ROW, a 76' wide roadway, a 12' wide painted median, with a 21' wide parkway on both sides of the roadway. Currently, Holland Road is a 2-lane, unimproved, undivided roadway, adjacent to the Residential Project Site Components and the Off-Site Project Components. Holland Road currently has an existing 60' ROW. The Project proposes to dedicate an additional 29' adjacent to the Residential Project Site Components (between Eucalyptus and Leon Roads). Project improvement would include an additional 8' of pavement, 6" curb, and a 21' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 14*, Holland/Leon Road (Residential Project Site Component)***. Holland Road will be improved to 32' of pavement between Leon Road and Briggs Road. An AC berm (either regular or rolled) shall be installed to control drainage. No curb, gutter, sidewalks or streetlights shall be installed along this segment of improvements.

- Leon Road

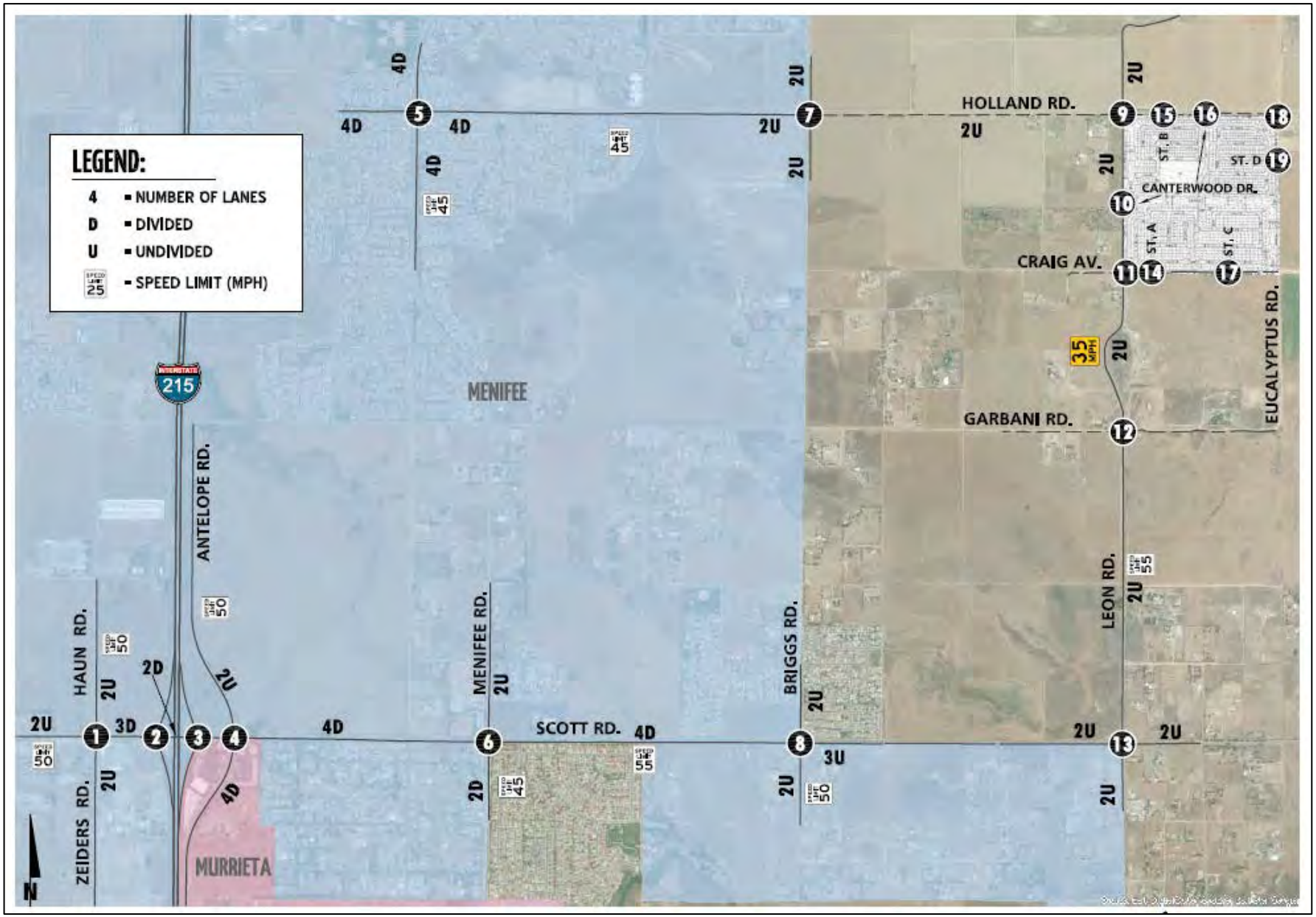
Leon Road is classified as an "Arterial Highway" on the Riverside County General Plan Roadway Network. According to **Figure 13,** an Arterial Highway is a 4-lane roadway with a 128' ROW, an 86' wide roadway, an 18' wide curbed median, with a 21' wide parkway on both sides of the roadway.

Currently, Leon Road is a 2-lane, improved, undivided roadway, adjacent to the Residential Project Site Component. Leon Road currently has an existing 60' ROW. The Project proposes to dedicate an additional 29' adjacent to the Residential Project Site Components (between Eucalyptus and Leon Roads. Project improvement would include an additional 8' of pavement, 6" curb, and a 21' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 14**.

- Craig Avenue

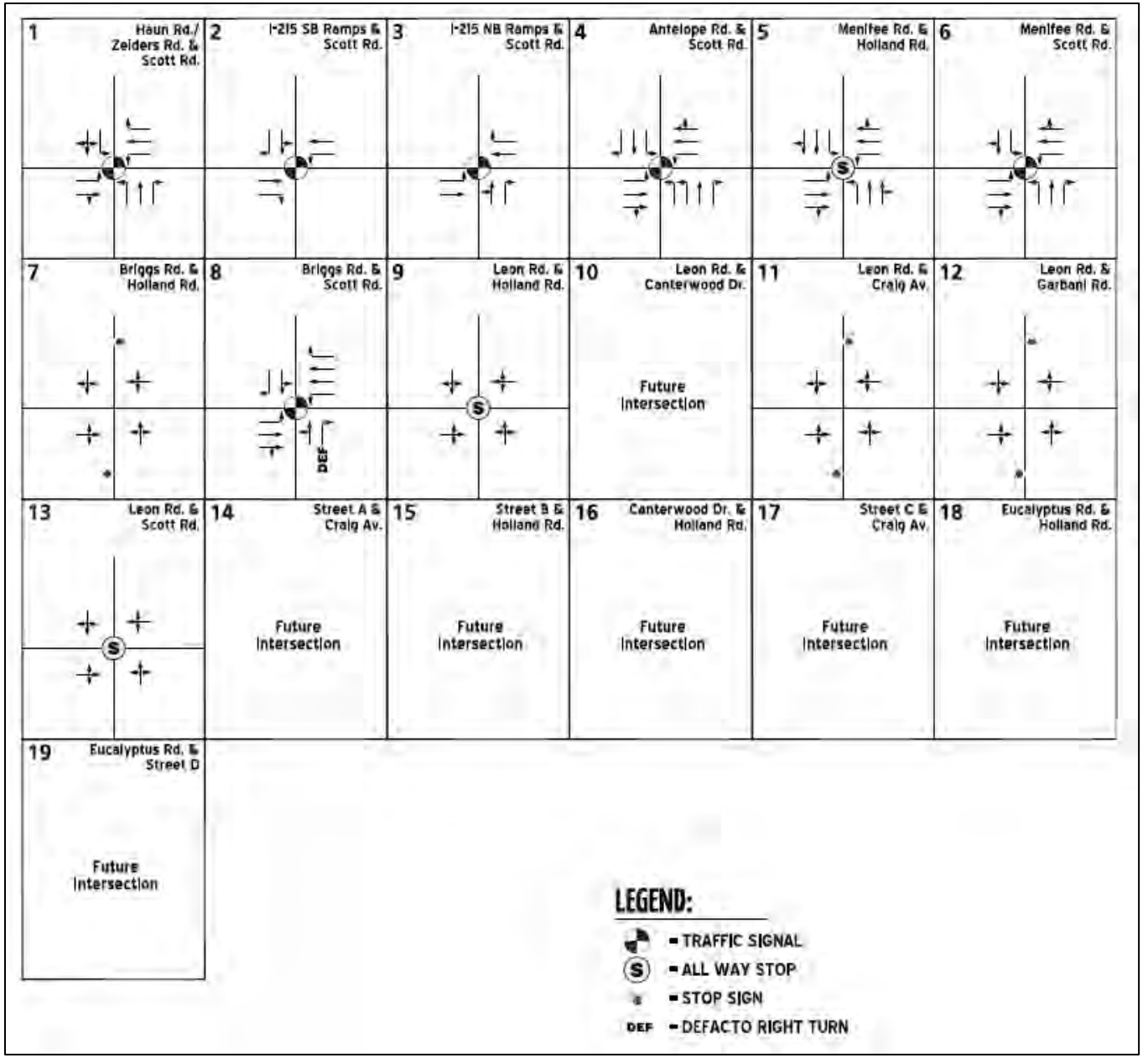
Craig Avenue is classified as a "Secondary Highway" on the Riverside County General Plan Roadway Network. According to **Figure 13,** a Secondary Highway is a 4-lane roadway with a 100' ROW, a 64' wide roadway, no median, with an 18' wide parkway on both sides of the roadway.

Figure 11
Existing Number of Through Lanes and Intersection Controls



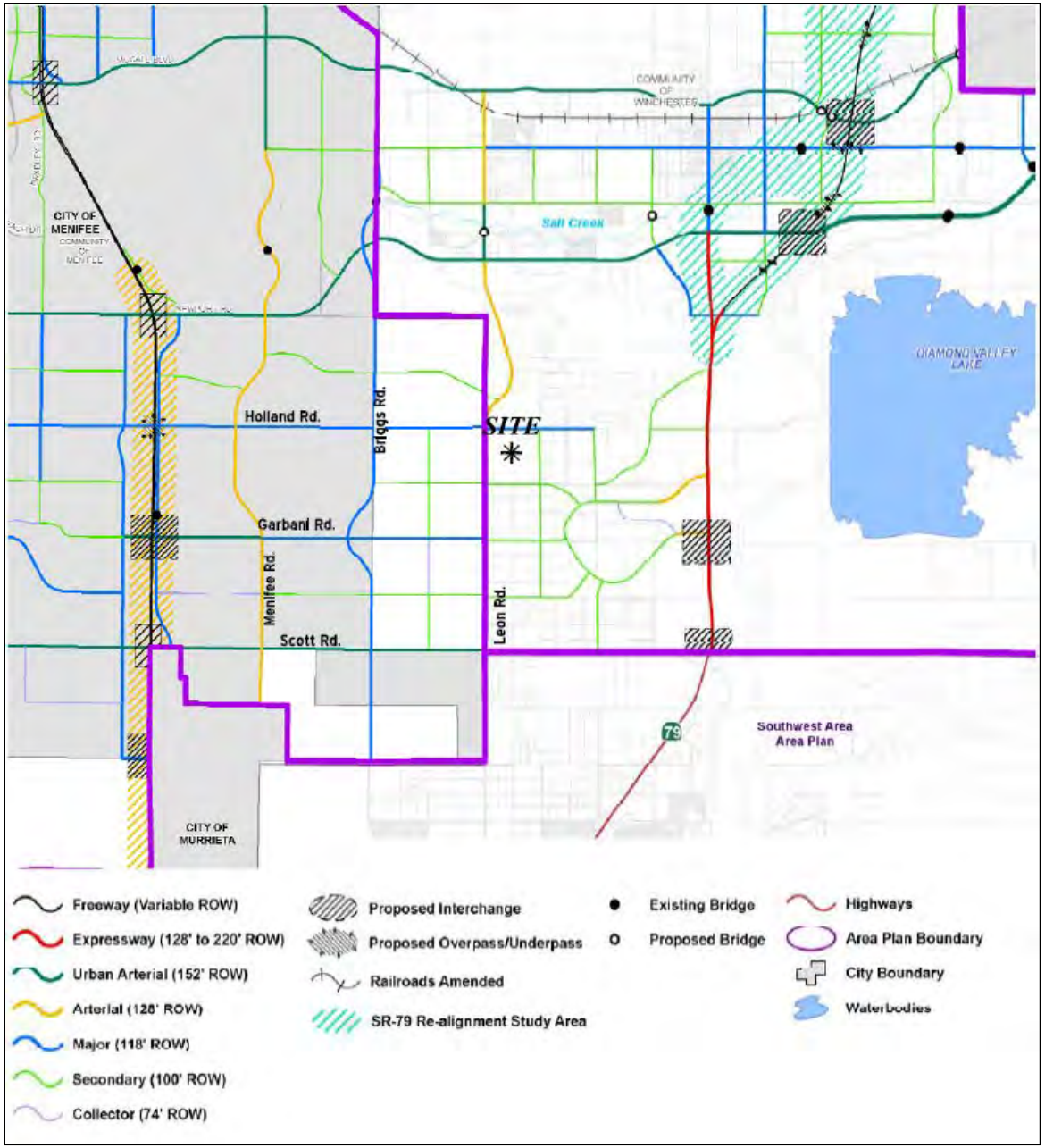
Source: Canterwood *TIA* (**Appendix K**)

Figure 11, continued
Existing Number of Through Lanes and Intersection Controls



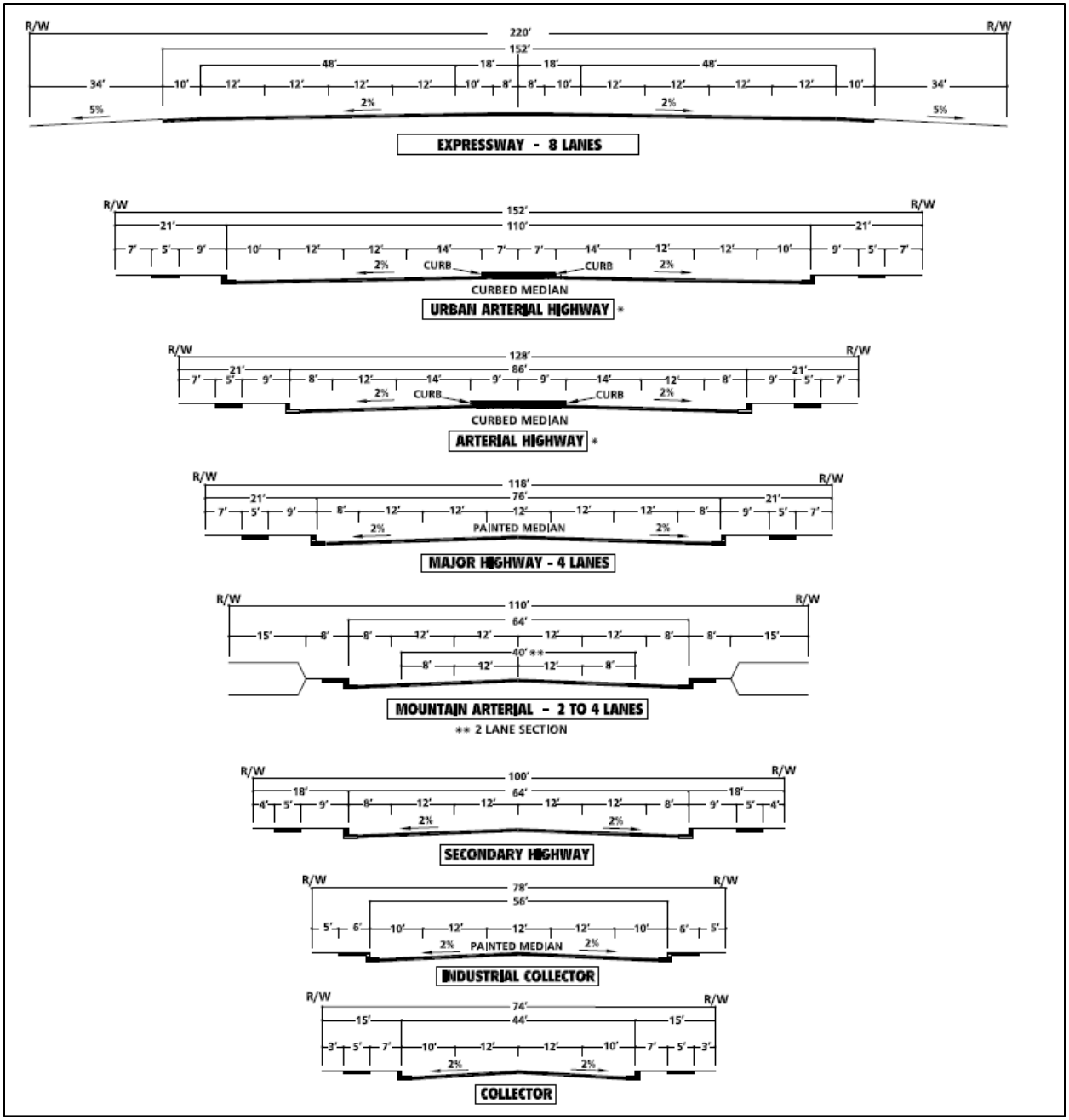
Source: Canterwood *TIA* (**Appendix K**)

Figure 12
Riverside County General Plan Roadway Network



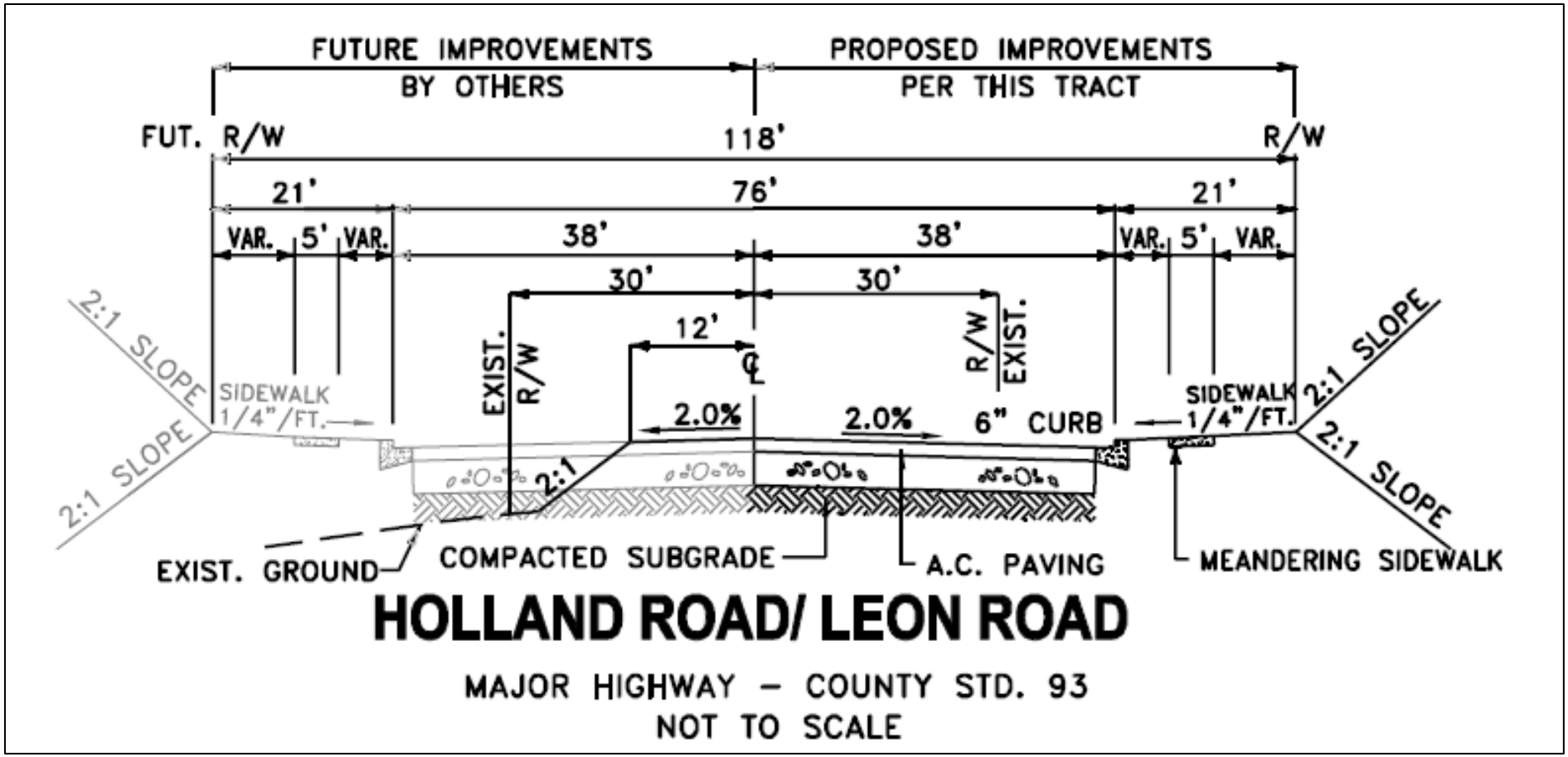
Source: Canterwood *TIA* (**Appendix K**)

Figure 13
Riverside County General Plan Roadway Cross-Sections



Source: Canterwood *TIA* (**Appendix K**)

Figure 14
Holland/Leon Road (Residential Project Site Component)



Source: Canterwood TTM 37439 Exhibit, March 2018

Currently, Craig Avenue is a 2-lane, unimproved, undivided roadway, adjacent to the Residential Project Site Component. Craig Avenue currently has an existing 44' ROW. The Project proposes to dedicate an additional 60' adjacent to the Residential Project Site Components (between Eucalyptus and Leon Roads). Project improvement would include an additional 32' of pavement, 6" curb, and an 18' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway.

Reference **Figure 15*, Craig Avenue***.

- Eucalyptus Road

Eucalyptus Road is classified as a "Secondary Highway" on the Riverside County General Plan Roadway Network. According to **Figure 13,** a Secondary Highway is a 4-lane roadway with a 100' ROW, a 64' wide roadway, no median, with an 18' wide parkway on both sides of the roadway.

Currently, Eucalyptus Road is a 2-lane, unimproved, undivided roadway, adjacent to the Residential Project Site Component. Eucalyptus Road currently has an existing 44' ROW. The Project proposes to dedicate an additional 50' adjacent to the Residential Project Site Components (between Craig and Briggs Roads). Project improvement would include a 32' of pavement, no median, a 6" curb, and an 18' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway.

Reference **Figure 16*, Eucalyptus Road***.

- On-Site - Internal Roadways

The Project provides a hierarchy of roadways on-site. Streets "A" and "B" provide the main ingress and egress for the Project to the adjacent roadways, Leon Road and Holland Road, respectively. Additional ingress and egress for the Project is provided via internal streets accessing Craig Avenue and Eucalyptus Road. Streets "C" and "D" provide access to the 8.96-acre park. All remaining streets ("E" – "Z" and "YY" and "ZZ") take access from Streets "A" and "B." In addition, entrances to Streets "A," "B," "M," "T," "Y," and "YY" will have a modified section.

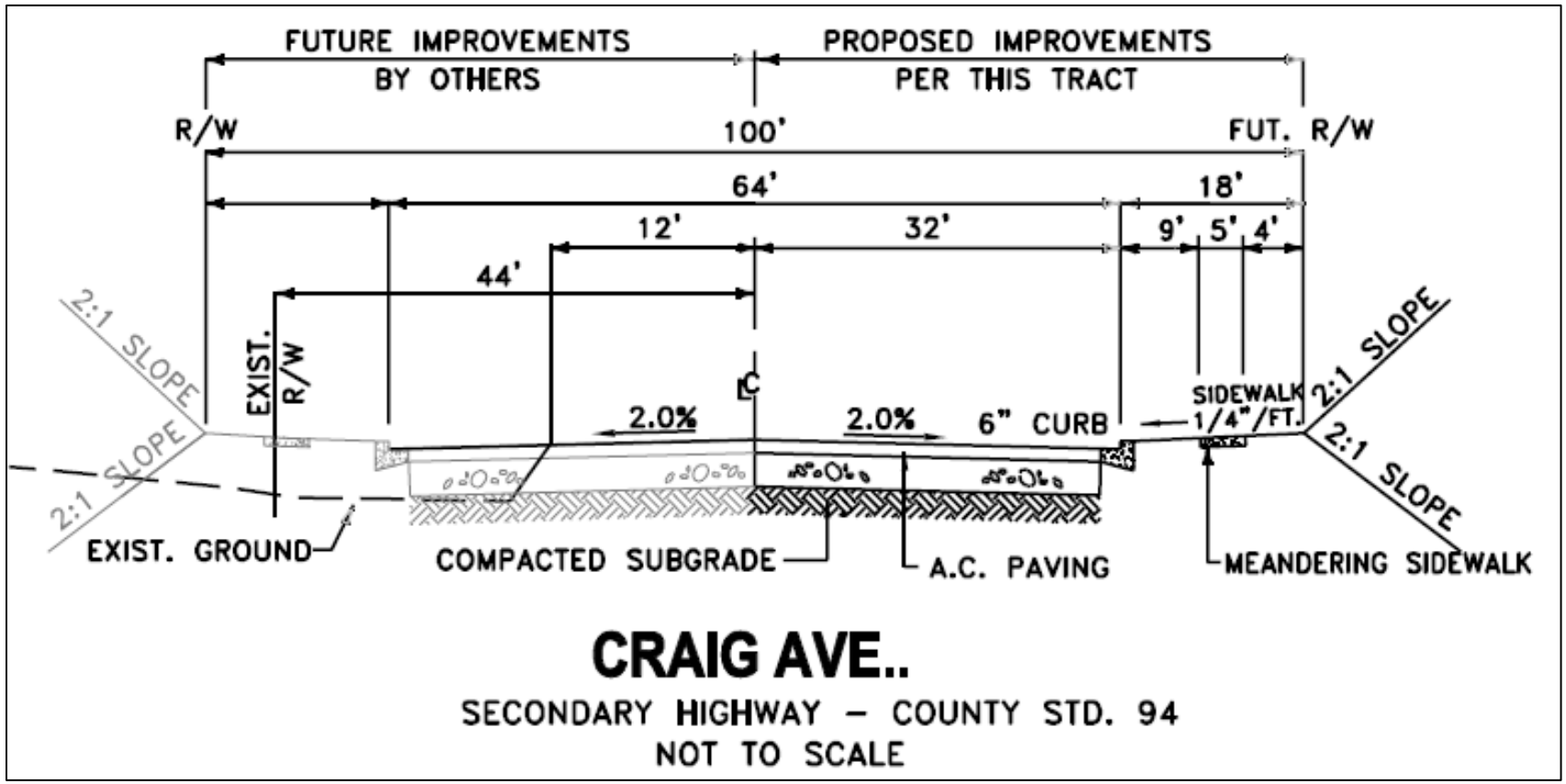
Streets "A" and "B" will have a 74' ROW, 44' of pavement, 6" curb, and an 11' wide parkway with a 5' wide sidewalk that is separated from the curb by the parkway. Reference **Figure 17*, Streets "A" and "B"***.

Streets "C" and "D" will have a 66' ROW, 44' of pavement, 6" curb, and a 15' wide parkway with a 5' wide meandering sidewalk that is separated from the curb by the parkway. Reference **Figure 18*, Streets "C" and "D"***.

Streets "D" – "Z" and "ZZ" and "YY" will have a 56' ROW, 36' of pavement, a 6" curb, and a 10' wide parkway with a 5' wide sidewalk that is separated from the curb by the parkway. Reference **Figure 19*, Streets "D" – "Z" and "ZZ" and "YY"***.

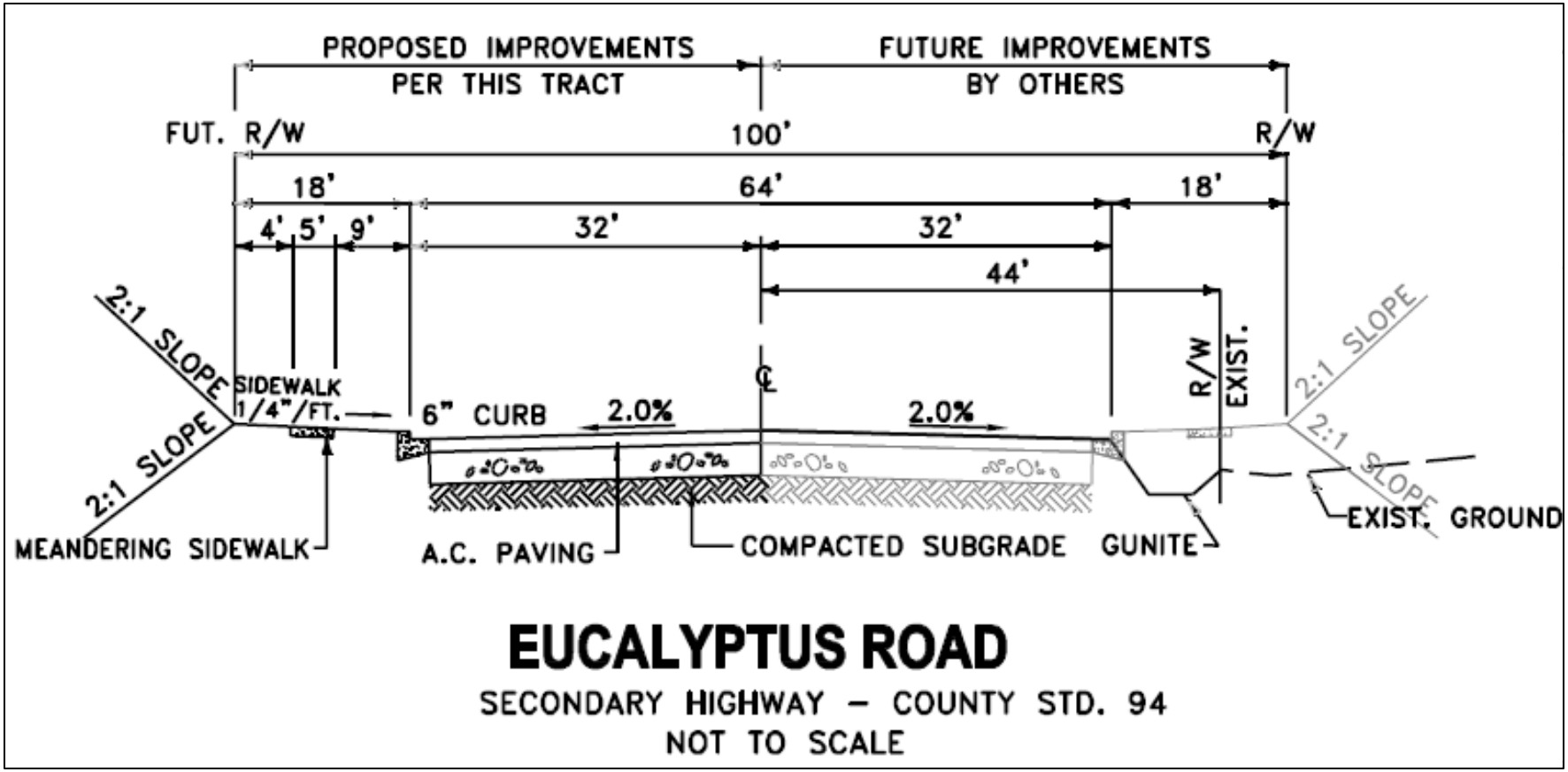
Entrances to Streets "A," "B," "M," "T," "Y," and "YY" will have an 80' ROW, 40' of pavement, a 10' wide curbed median, a 6" curb, and a 15' wide parkway with a 5' wide sidewalk that is separated from the curb by the parkway. Reference **Figure 20*, Entrances to Streets "A," "B," "M," "T," "Y," and "YY"***.

Figure 15
Craig Avenue



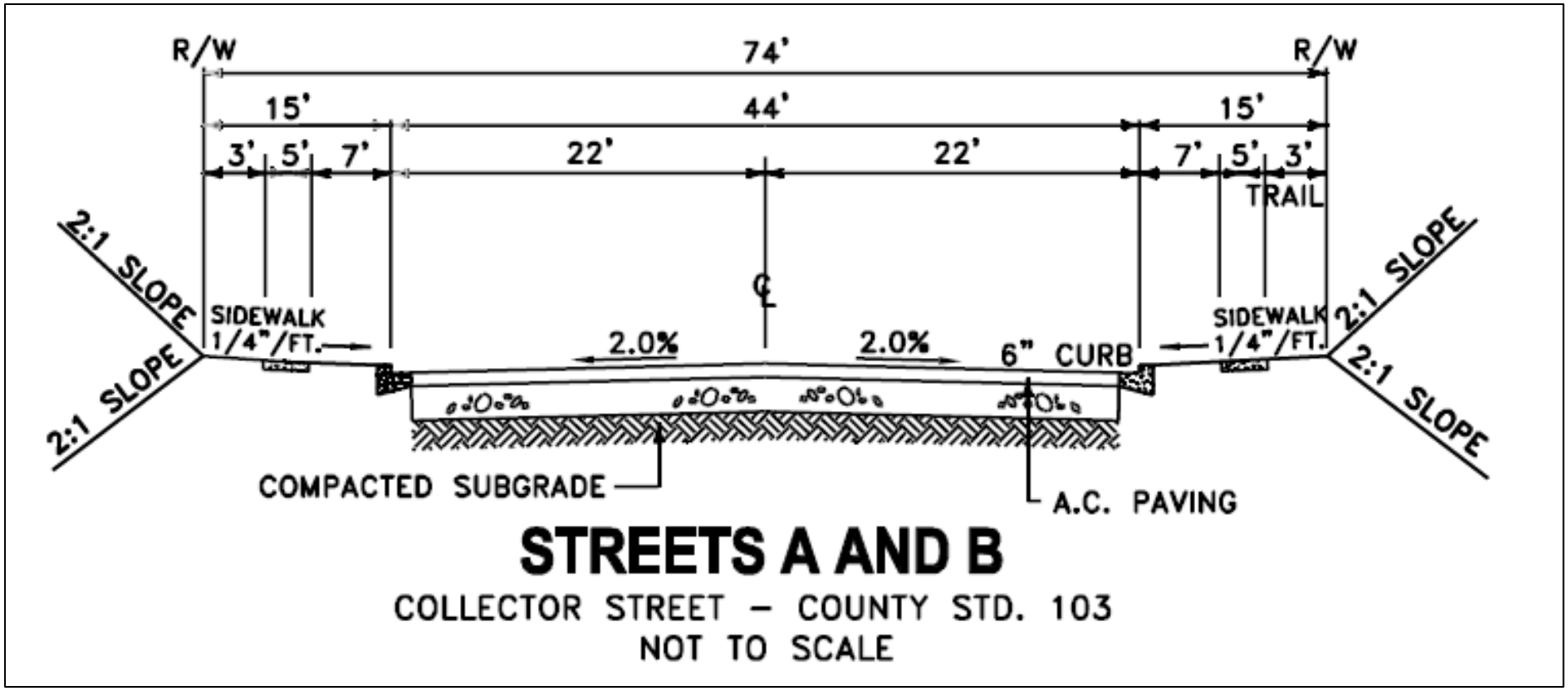
Source: Canterwood TTM 37439 Exhibit, March 2018

Figure 16
Eucalyptus Road



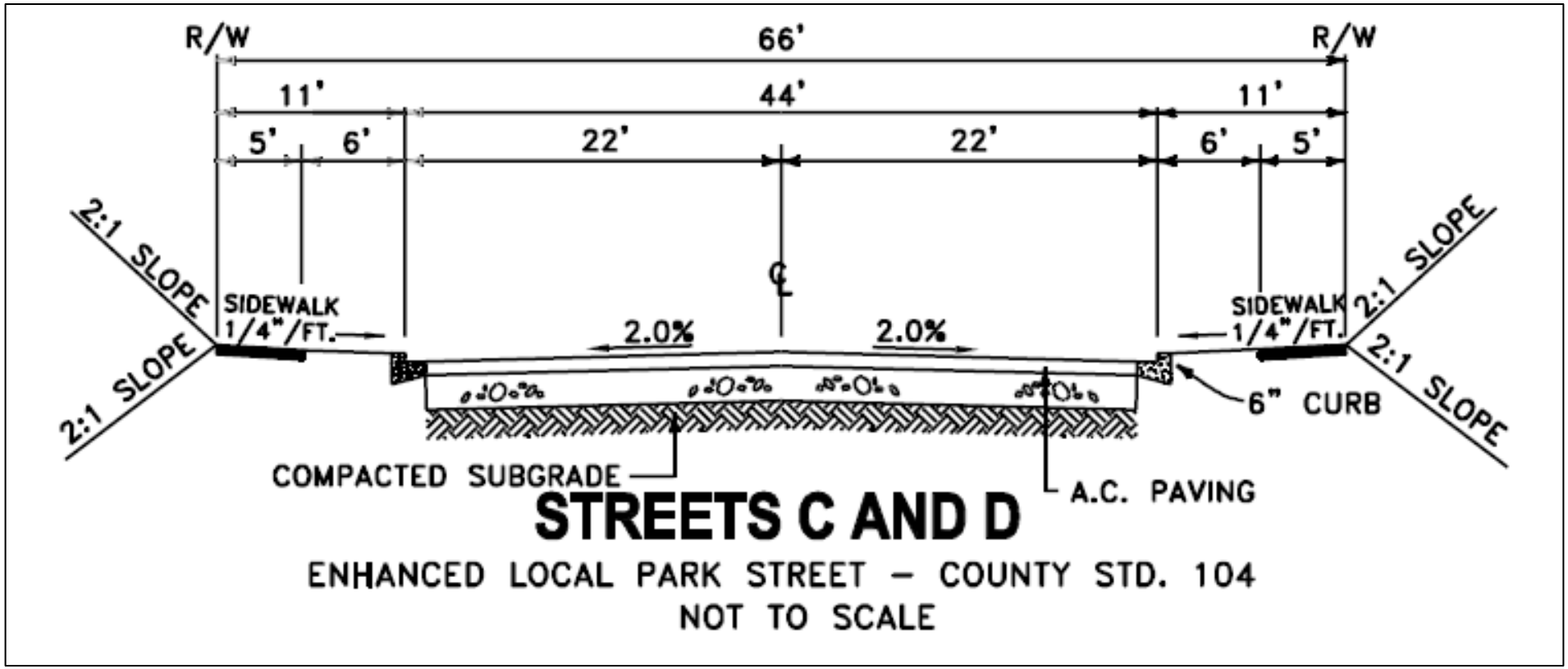
Source: Canterwood TTM 37439 Exhibit, March 2018

Figure 17
Streets "A" and "B"



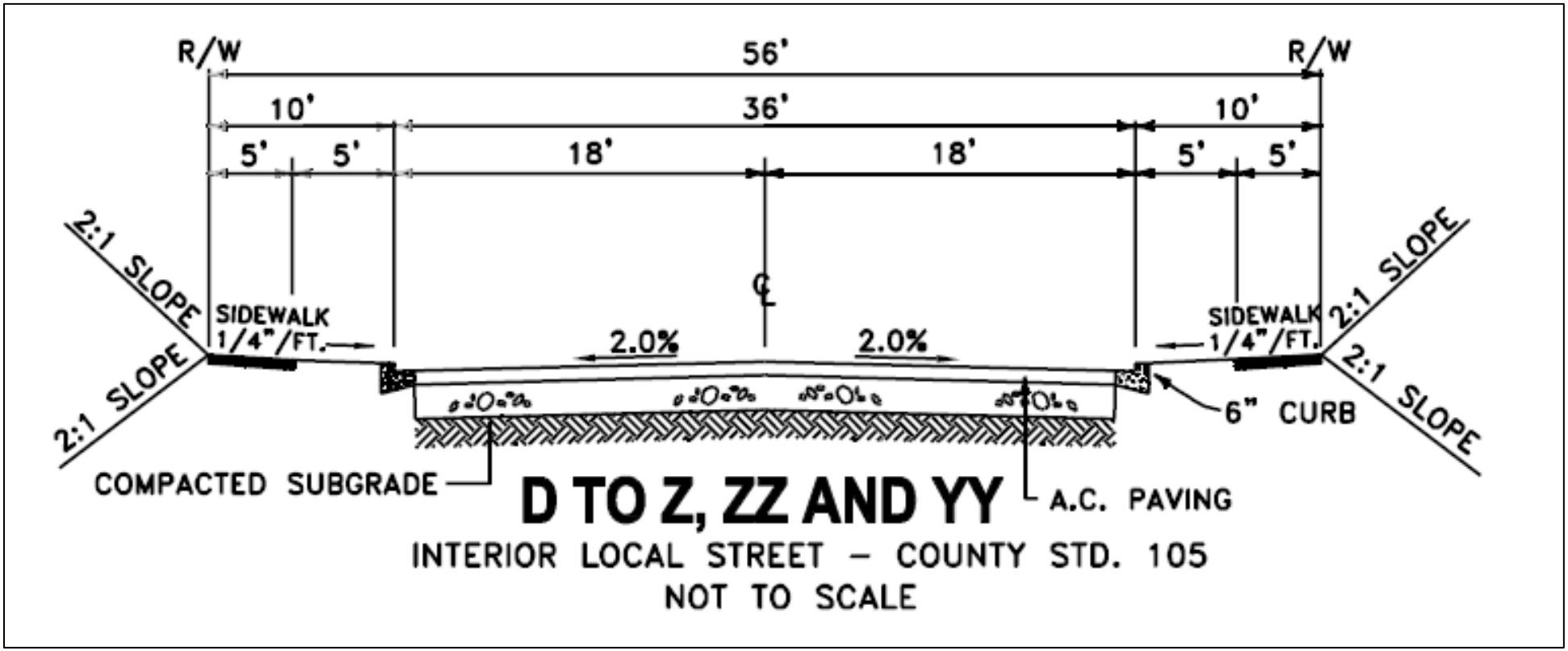
Source: Canterwood TTM 37439 Exhibit, March 2018

Figure 18
Streets "C" and "D"



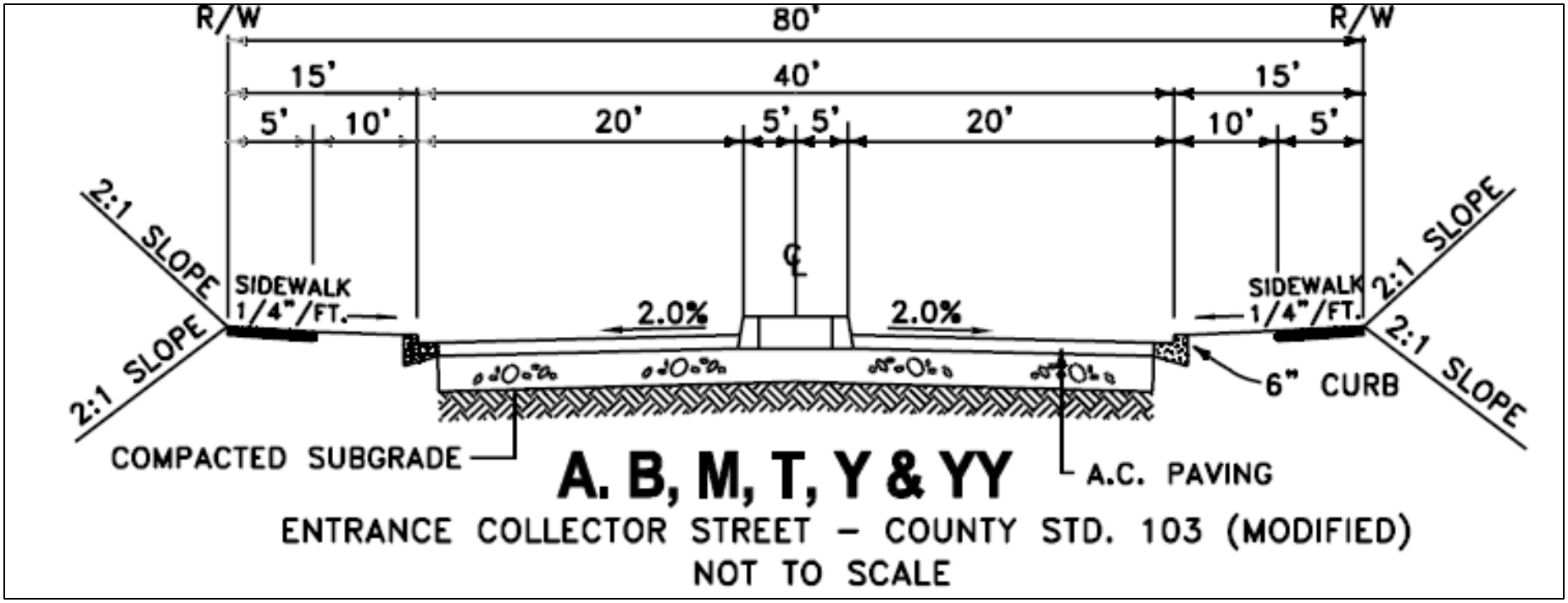
Source: Canterwood TTM 37439 Exhibit, March 2018

Figure 19
Streets "D" – "Z" and "ZZ" and "YY"



Source: Canterwood TTM 37439 Exhibit, March 2018

Figure 20
Entrances to Streets "A," "B," "M," "T," "Y," and "YY"



Source: Canterwood TTM 37439 Exhibit, March 2018

Alternative modes of transportation include sidewalks, trails, paseos and transit. Sidewalks, trails, paseos were described above in 2.a. Drainage Channels (Lots 577, 581, and 588) will be flanked on either side by a 16' wide maintenance road/hiking trail. The proposed maintenance road and hiking trails will be maintained by the County CFD. Sidewalks will be provided along all Project streets, as well as within the paseos. A "Regional Trail: Urban/Suburban" (Trail Detail: Parks – 3001) will be installed along both Holland and Eucalyptus Roads along the Residential Project Site Components frontage. This is a 20'-wide (minimum) section, located outside of the ROW, with a 4'-wide (minimum) buffer separated from a 10'-wide (minimum) trail by a 48" high (minimum) split rail PVC fence; with another 2'-wide (minimum) buffer. The minimum overhead clearance shall be 12'. The trail will be a minimum 6" thick layer of decomposed granite. Reference **Figure 21*, Regional Trail: Urban/Suburban***.

Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic.

Riverside Transit Agency (RTA) provides bus services along Antelope Road, Menifee Road and Scott Road via Route 61. RTA Route 208 has services along the I-215 Freeway. At the current time, there are no existing transit routes that could potentially serve the Project. Transit service is reviewed and updated by the RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments, which may lead to either enhanced or reduced service where appropriate.

e. Utilities

All utilities and public services are currently available on, or adjacent to, the proposed Project site. Utility and Service providers are as follows:

- Electricity: Southern California Edison
- Water: Eastern Municipal Water District
- Sewer: Eastern Municipal Water District
- Cable: Time Warner Cable
- Gas: Southern California Gas
- Telephone: Verizon
- School: Menifee Valley Unified School District

Reference **Figure 7, *TTM 37439 Conceptual Grading Plan***, and *Map My County (**Appendix A**)*.

- Sewer and Water Facilities

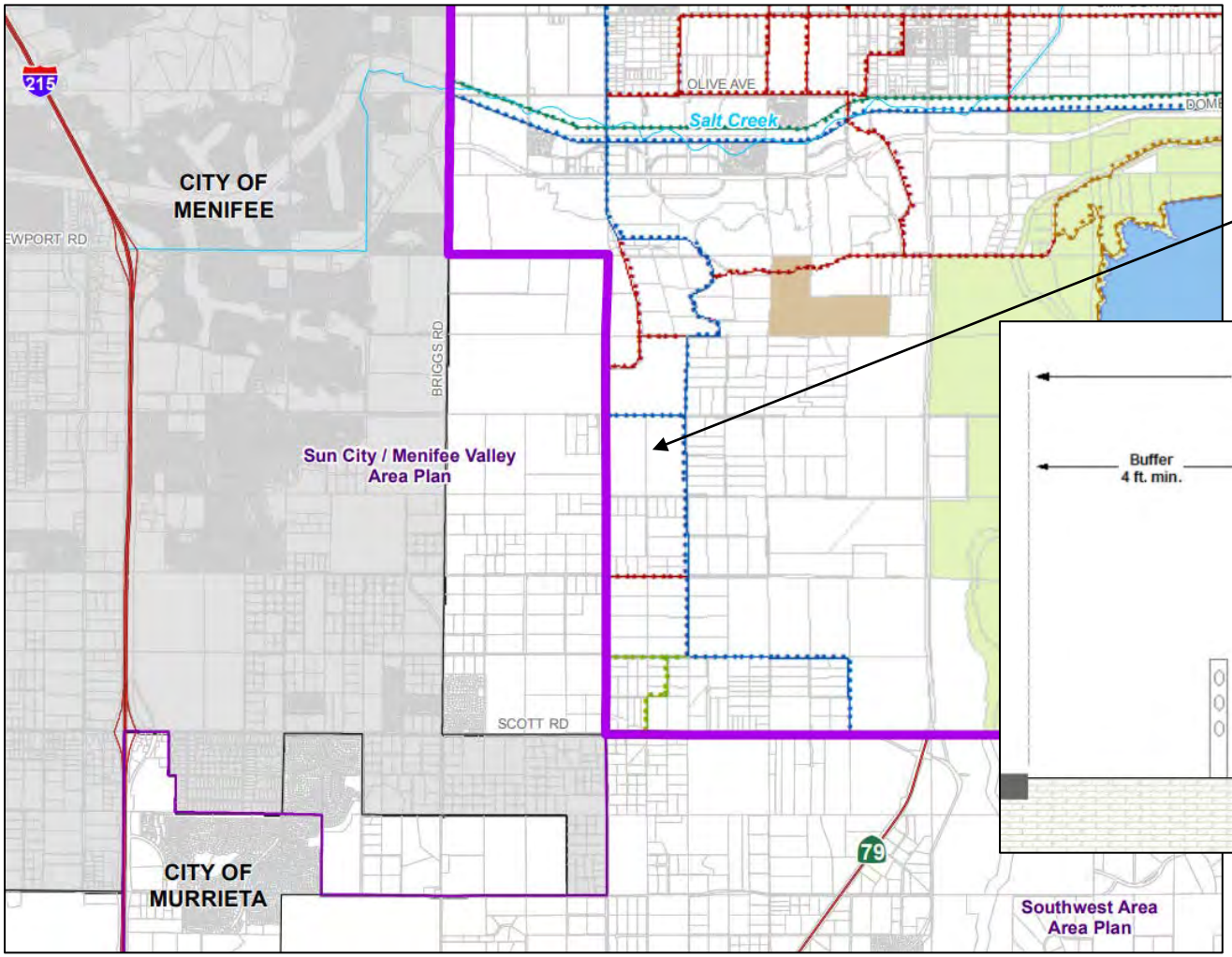
The proposed Project will tie into an existing 48" Eastern Municipal Water District (EMWD) water line in Leon Road and an existing 30" EMWD water line in Craig Avenue. 10,850 linear feet of sewer line, which will extend from Leon Road on the western boundary of the residential Project site, proceed 5,780' westerly within an EMWD easement to the intersection of Holland and Briggs Roads, then proceed 2,690' northerly within the Briggs Road ROW, finally proceeding 2,380' westerly within the Tres Lagos Drive ROW where it will terminate into a proposed sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee. The EMWD sewer easement will be within the proposed Holland Channel and will require shared access within the future RCFC&WCD right-of-way.

The lift station would be constructed on an approximately 0.22 acre site. It is anticipated that the lift station would include a wet well, valve vault, provisions for odor control, a control building with electrical facilities and emergency standby generator, and an electrical service panel and transformer.

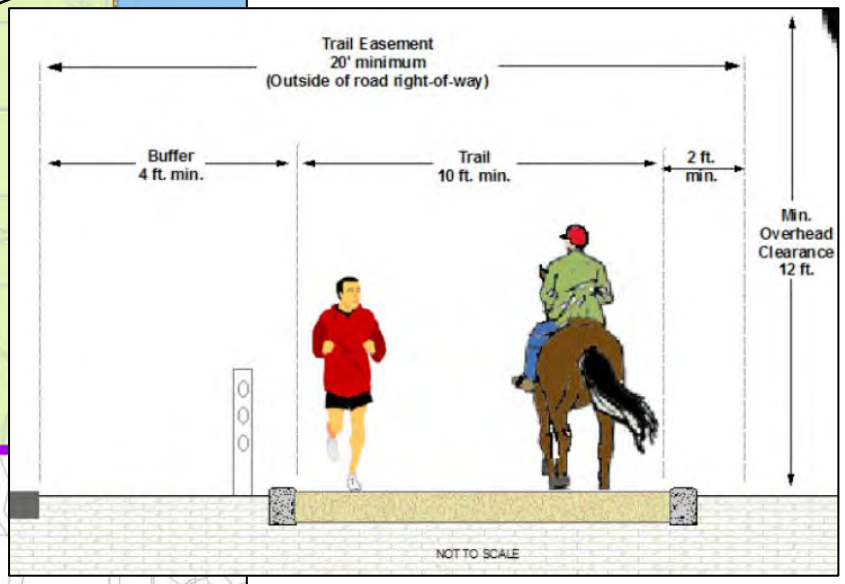
The lift station would have two 20 horsepower (HP) pumps installed (one duty and one standby). These pumps would utilize electrical energy on an annual basis. This station would also have an 80 kilowatt (KW) emergency diesel generator to be used during electrical power outages.

To calculate power usage, it is assumed that one 20 HP pump will run approximately 11 hours per day on average to meet ultimate average flows.

Figure 21
Regional Trail: Urban/Suburban



RESIDENTIAL PORTION OF SITE



- Regional Trail: Urban/Suburban
- Community Trail
- Combination Trail (Regional Trail / Class I Bike Path)
- Class I Bike Path
- Regional Trail: Open Space
- Non-County Trail (Public and Quasi-Public Lands)

Source: HV/WAP http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633

A. Type of Project: Site Specific ☒; Countywide ☐; Community ☐; Policy ☐.

B. Total Project Area:

Residential Acres: 79.54 **Lots:** 574 **Units:** N/A **Projected No. of Residents:** 1,733
Commercial Acres: N/A **Lots:** N/A **Sq. Ft. of Bldg. Area:** N/A **Est. No. of Employees:** N/A
Total Open Space Acres: 25.81
Open Space – Recreation Acres: 25.81
Open Space – Conservation Acres: N/A
Public Facilities Acres (K-8 School): N/A
Major Circulation Acres:

- Residential Project Site Components: 45.60 acres
- Off-Site Project Components Holland Road between Leon and Briggs Roads: approximately 3.65 acres (30' width x 5,300 linear feet/43,560)

Industrial Acres: N/A

C. Assessor's Parcel No(s):

1. Residential Project Site Components

466-310-026 and 466-310-002.

2. Off-Site Project Components

466-120-023, 466-120-014, 466-120-021, 466-120-011, 466-120-022, 466-120-002, 466-120-019, and 364-200-007.

Reference **Figure 3, *Assessor's Parcel Map***.

D. Street References:

1. Residential Project Site Components

West of Eucalyptus Road; north of Craig Avenue; east of Leon Road; and south of Holland Road.

2. Off-Site Project Components

- Sewer: westerly within the Holland Road right-of-way (ROW), westerly within the EMWD easement, westerly within the Tres Lagos Drive ROW where it will terminate into an existing sewer lift station located on the south side of Tres Lagos Drive, at the northwesterly corner of the Wilderness Lakes RV Resort, in the City of Menifee.
- Offsite Drainage Trapezoidal Earthen drainage facilities: The trapezoidal earthen channel will extend from the existing Reinforced Concrete Box culver at Southshore Drive and extend to the south east, within Tract Map 31229 (Nautical Cove) Project Site to Holland Road and Briggs Road. A culvert system will be proposed under the intersection of Holland and Briggs Roads, where the culvert crosses diagonally. The channel will extend to the east from Briggs Road and Holland Road to Leon Road. In closing the channel will commence downstream at the Summerhouse residential community, south of Tres Lagos Drive and terminate at Leon Road.
- Holland Road roadway improvements: along Holland Road south of the San Pedro Farms Project (TTM 36467) between Leon Road and Briggs Road.

E. Section, Township & Range Description:

1. Residential Project Site Components

Section 8, Township 6 South, Range 2 West.

2. Off-Site Project Components

Section 7, Township 6 South, Range 2 West.
Section 1, Township 6 South, Range 3 West.
Section 8, Township 6 South, Range 2 West.

F. Brief description of the existing environmental setting of the Project site and its surroundings:

The Project is located in unincorporated Riverside County, California east of the City of Menifee. The Project area is separated from the coastline approximately 34 miles across the Santa Ana Mountain range. Regional access to the area is provided to the general area in a north-south direction by the Interstate 215 (I-215) freeway and by Highway 79, and State Route 74 in an east-west direction.

The Project area is located in the eastern portion of the Menifee Valley, one of the many tectonically controlled valleys within the valley-and-ridge systems found in the Perris Block. These structurally depressed troughs are filled with non-marine sediments of upper Pliocene through Recent age, while the ridges are typically composed of plutonic igneous rocks, metasedimentary rocks, and late-stage intrusive dikes.

The Perris Block is defined as a region between the San Jacinto and Elsinore-Chino fault zones, bounded on the north by the Cucamonga (San Gabriel) Fault and on the south by a vaguely delineated boundary near the southern end of the Temecula Valley. It is considered to have been active since Pliocene time. The Project area lies across the level valley floor, away from the flanks of any of the ridge systems. In this area, the valley trends nearly east-west and is likely to be more erosional than tectonic in origin.

1. Residential Project Site Components

The Residential Project site consists of a generally square-shaped tract of agricultural land in Assessor's Parcel Numbers (APN) 466-310-002 and -026, bounded by Holland Road on the north, Eucalyptus Road on the east, Craig Avenue on the south, and Leon Road on the west. The Project site is approximately 158.18 gross acres. The terrain is generally level, with elevations ranging between approximately 1,425 feet and 1,440 feet above mean sea level (AMSL). Portions of the agricultural fields at the main Project site are planted in such crops as potatoes and cilantro. The field to the west of Leon Road, where the flood-control channel right-of-way lies, is currently used for cattle grazing.

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads and single family residential land uses.

2. Off-Site Project Components

The site of the proposed offsite trapezoidal earthen drainage channel (Holland Channel) lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed offsite trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Leon Road at the east to Southshore Drive to the west. The proposed trapezoidal earthen drainage channel bounded at east by Leon Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Southshore Drive. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the Holland Road, Briggs Road, and Tres Lagos Road ROWs. All three of these roadways have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. The Holland Road off-site roadway improvements will also be located within the existing ROW. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

A. General Plan Elements/Policies: Project consistency with the Goals and Policies contained in the following General Plan Elements will be analyzed in the Draft Environmental Impact Report (DEIR):

1. Land Use;
2. Circulation;
3. Multipurpose Open Space;
4. Safety;
5. Noise;
6. Housing;
7. Air Quality; and
8. Healthy Communities.

B. General Plan Area Plan(s):

1. Residential Project Site Components: Harvest Valley/Winchester Area Plan (HV/WAP).

2. Off-Site Project Components: Sun City/Menifee Valley (SC/MVAP).

C. Foundation Component(s): Community Development.

D. Land Use Designation(s):

1. Residential Project Site Components:

- Existing – Medium Density Residential (MDR).
- Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

2. Off-Site Project Components:

- Existing – Estate Density Residential (EDR).

- Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

E. General Plan Policy Overlay(s): none

F. General Plan Policy Area(s): None.

1. **Residential Project Site Components:** Highway 79 Policy Area.

2. **Off-Site Project Components:** Highway 79 Policy Area and Estate Density Residential & Rural Residential Policy Area.

G. Adjacent and Surrounding:

1. **Area Plan(s):**

   a. **Residential Project Site Components:** Harvest Valley / Winchester Area Plan (HV/WAP).

   b. **Off-Site Project Components:** Sun City/Menifee Valley (SC/MVAP).

2. **Foundation Component(s):** Community Development (CD) and Rural Community (RC).

3. **Land Use Designation(s):**

   a. **Residential Project Site Components (all CD):**
      - North: Medium Density Residential (MDR).
      - South: Medium Density Residential (MDR).
      - East: Medium Density Residential (MDR).
      - West: Estate Density Residential (EDR).

   b. **Off-Site Project Components (CD and RC):**
      - North: Estate Density Residential (CD: EDR).
      - South: Estate Density Residential (RC: EDR).
      - East: Medium Density Residential (CD MDR).
      - West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

4. **General Plan Policy Overlay(s):** None.

5. **General Plan Policy Area(s):** Highway 79 Policy Area and Estate Density Residential & Rural Residential Policy Area.

B. Adopted Specific Plan Information:

1. **Name and Number of Specific Plan, if any:** N/A.

2. **Specific Plan Planning Area, and Policies, if any:** N/A.

C. Existing Zoning:

1. **Residential Project Site Components:** One-Family Dwellings (R-1).

2. **Off-Site Project Components:** Light Agriculture, 5-acre minimum lot size (A-1-5).

D. Proposed Zoning:

1. **Residential Project Site Components:** Planned Residential (R-4).

2. **Off-Site Project Components:** None.

B. Adjacent and Surrounding Zoning:

1. **Residential Project Site Components:**
   - North: Specific Plan (SP) – (Specific Plan 293 - Winchester Hills).
   - South: Rural Residential (R-R).
   - East: Rural Residential (R-R) and One-Family Dwellings (R-1).
   - West: Rural Residential (R-R) and Light Agriculture, 5-acre minimum lot size (A-1-5).

2. **Off-Site Project Components:**
   - North:
     - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
     - City of Menifee: Rural Residential (R-R).
   - South:
     - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
     - City of Menifee: Light Agriculture, 2½-acre minimum lot size (A-1-2½).
   - East:
     - County of Riverside: Rural Residential (R-R), One-Family Dwellings (R-1), and Light Agriculture, 2½-acre minimum lot size (A-1-2½).
     - City of Menifee: N/A.
   - West:
     - County of Riverside: Light Agriculture, 5-acre minimum lot size (A-1-5).
     - City of Menifee: Menifee East Specific Plan (SP).

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below ☒ would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☒ Aesthetics
☒ Agriculture Resources
☒ Air Quality
☒ Biological Resources
☒ Cultural Resources
☒ Geology/Soils
☒ Greenhouse Gas Emissions
☒ Hazards & Hazardous Materials
☒ Hydrology/Water Quality
☒ Land Use/Planning
☐ Mineral Resources
☒ Noise
☐ Paleontological Resources
☒ Population/Housing
☐ Public Services
☒ Recreation
☒ Transportation/Traffic
☒ Tribal Cultural Resources
☒ Utilities/Service Systems
☐ Other (Cumulative Impacts)
☐ Other
☒ Mandatory Findings of Significance

IV. DETERMINATION

On the basis of this initial evaluation:

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED
☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project, described in this document, have been made or agreed to by the project proponent. **A MITIGATED NEGATIVE DECLARATION** will be prepared.
☒ I find that the proposed project MAY have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS PREPARED
☐ I find that although the proposed project could have a significant effect on the environment **NOTHING FURTHER IS REQUIRED** because all potentially significant effects (a) have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project.
☐ I find that although all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, some changes or additions are necessary but none of the conditions described in California Code of Regulations, Section 15162 exist. An **ADDENDUM** to a previously-certified EIR or Negative Declaration has been prepared and will be considered by the approving body or bodies.
☐ I find that at least one of the conditions described in California Code of Regulations, Section 15162 exist, but I further find that only minor additions or changes are necessary to make the previous EIR adequately apply to the project in the changed situation; therefore, a **SUPPLEMENT TO THE ENVIRONMENTAL IMPACT REPORT** is required that need only contain the information necessary to make the previous EIR adequate for the project as revised.
☐ I find that at least one of the following conditions described in California Code of Regulations, Section 15162, exist and **a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT** is required: (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any the following:(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or,(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR or negative declaration would substantially reduce one or more significant effects of the project on the environment, but the project proponents decline to adopt the mitigation measures or alternatives.

Signature	Date
Russell Brady, Project Planner For Charissa Leach, P.E., Assistant TLMA Director	10-2-2018
Printed Name	

V. ENVIRONMENTAL ISSUES ASSESSMENT

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the Project. In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the County of Riverside, in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the proposed Project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed Project.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS. Would the Project:				
1. Scenic Resources. a) Have a substantial effect upon a scenic highway corridor within which it is located?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?	☒	☐	☐	☐

Source(s): Harvest Valley/Winchester Area Plan (*HVWAP*) – *HVWAP* Figure 10, *Harvest Valley/Winchester Area Plan Scenic Highways*; Sun City/Menifee Valley Area Plan (*SCMVAP*) – *SCMVAP* Figure 8, *Sun City/Menifee Valley Area Plan Scenic Highways*; Riverside County General Plan (*General Plan*); *Map My County, (***Appendix A**); Site Photos taken by Angie Douvres on April 18, 2018 (**Appendix B**); Countywide Design Standards & Guidelines; and **Figure 1-1, *General Plan Land Use Map (Project Site and Surrounding*).**

Findings of Fact:

a) Would the Project have a substantial effect upon a scenic highway corridor within which it is located?

No Impact

The Project site is located in both the *HVWAP* and the *SCMVAP*.

Per the *HVWAP,* State Route 74 (SR 74) from the Orange County border to the western edge of the San Bernardino National Forest has been designated as an Eligible State Scenic Highway. SR 74 passes through Homeland, Romoland, and Green Acres. SR 74 continues east out of the *HVWAP* to the Palms to Pines Highway, an official State Scenic Highway. Menifee Road/McCall Road is a County Eligible Scenic Highway that runs from SR 74 south out of the *HVWAP*, into the *SCMVAP*, and eventually connects with Interstate 215 (I-215).

Per the *SCMVAP,* I-215 from McCall Boulevard to the southerly *SCMVAP* boundary is a County Eligible Scenic Highway.

At its closest point, the Project is located approximately 4.75 miles south of SR 74, 3.3 miles southerly of Menifee Road/McCall Road, and approximately 1.45 miles east of I-215.

Based on the Project's distance from these to scenic highways/scenic highway corridors, implementation of the proposed Project will not have a substantial effect upon a scenic highway corridor within which it is located. No impacts will occur.

No additional analysis will be required in the EIR.

b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?

Potentially Significant Impact

A field reconnaissance of the Project site was conducted on April 18, 2018 by Angie Douvres. During the field reconnaissance site photographs (**Appendix B)** were taken of the Project site and the surrounding environs.

The Project is located in an area that currently is predominantly agricultural in nature, with a few residences on large lots. However, as shown below, is in an area that will be ultimately developed with suburban development, based on existing General Plan Land Use designations:

a. Residential Project Site Components (all CD):
- North: Medium Density Residential (MDR).
- South: Medium Density Residential (MDR).
- East: Medium Density Residential (MDR).
- West: Estate Density Residential (EDR).

b. Off-Site Project Components (CD and RC):
- North: Estate Density Residential (CD: EDR).
- South: Estate Density Residential (RC: EDR).
- East: Medium Density Residential (CD MDR).
- West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

Reference **Figure 1-1, *General Plan Land Use Map (Project Site and Surrounding)***.

Depending on the timing of the Project and other development in the immediate Project area, there may be the potential for short-term visual impacts as the area transitions from the current development state to the future development state envisioned under the General Plan.

The Project will be required to comply to the Countywide Design Standards & Guidelines (Guidelines). The Guidelines were adopted by the Board of Supervisors (BOS) on January 13, 2004 and were amended on August 20, 2014. The amended version of the Guidelines will apply to the Residential Project site components of the proposed Project.

Adherence to the Guidelines (**Standard Condition SC-AES-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

In order to ensure a comprehensive discussion as to whether the Project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in

the creation of an aesthetically offensive site open to public view, this issue will be analyzed in the EIR.

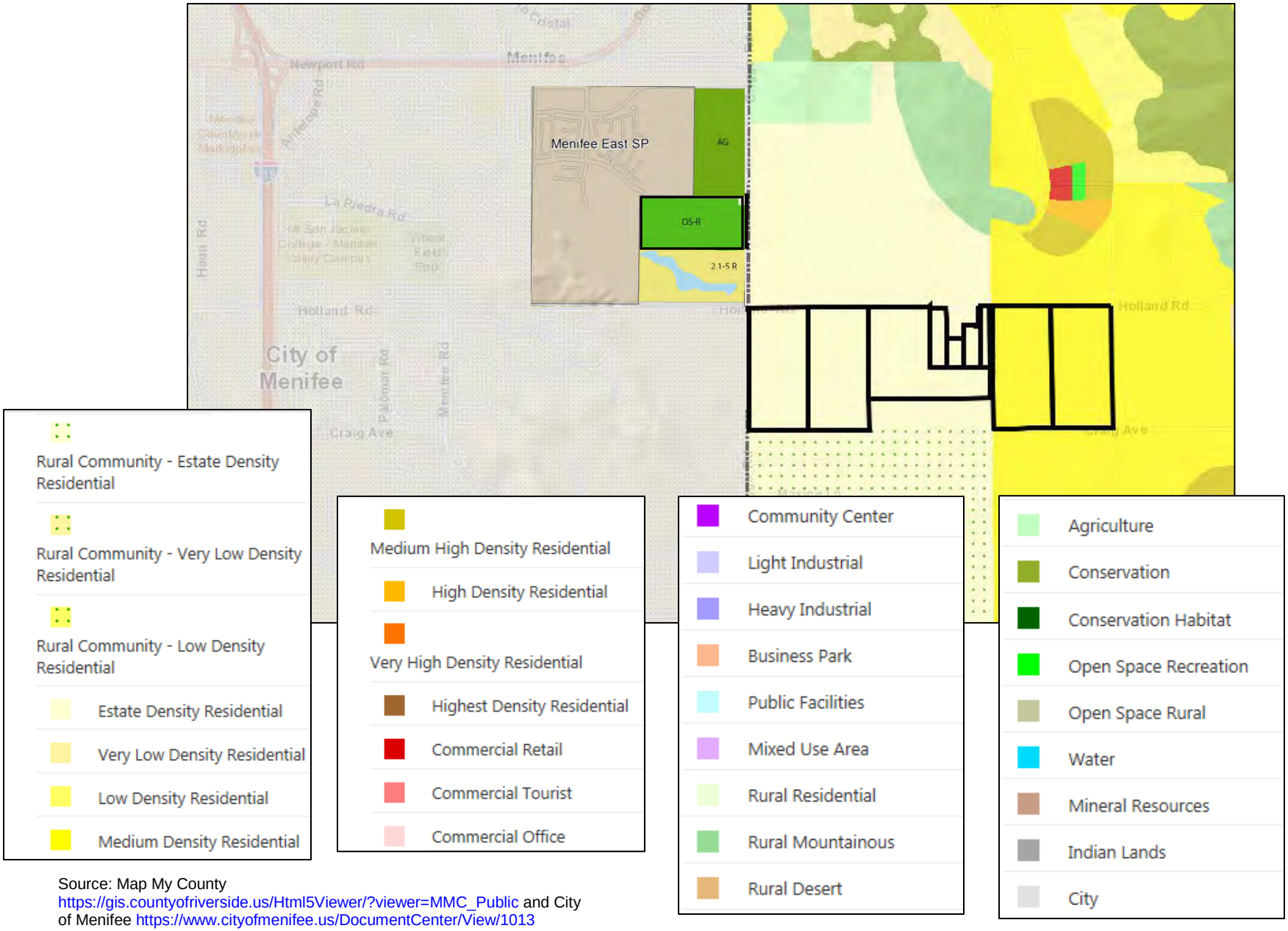
Standard Conditions and Requirements:

SC-AES-1 The Project shall be consistent with the Countywide Design Standards & Guidelines which are in effect at the time of map design and at building permit issuance.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

Figure 1-1
General Plan Land Use Map (Project Site and Surrounding)



Source: Map My County https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public and City of Menifee https://www.cityofmenifee.us/DocumentCenter/View/1013 accessed 2018

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS. Would the Project:				
2. Mt. Palomar Observatory. a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?	☐	☐	☒	☐

Source(s): *HVWAP*, Figure 7, *HVWAP Mt. Palomar Nighttime Lighting Policy Area*; *SCMVAP* Figure 5, *SCMVAP Mt. Palomar Nighttime Lighting Policy Area*; *Map My County,* (**Appendix A**); and Ordinance No. 655 (An Ordinance of the County of Riverside Regulating Light Pollution).

Findings of Fact:

a) Would the Project interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?

Less Than Significant Impact

According to *HVWAP*, Figure 7, *HVWAP Mt. Palomar Nighttime Lighting Policy Area*; and *SCMVAP* Figure 5, *SCMVAP Mt. Palomar Nighttime Lighting Policy Area*; the Project site is located within Zone B of the designated Special Lighting Area that surrounds the Mt. Palomar Observatory. At its closest point the Project site is approximately 25.3 miles northwest from the Observatory.

The following Policies are contained in the *HVWAP* and the *SCMVAP*, respectively:

- **HVWAP 9.1:** Adhere to the lighting requirements specified in Riverside County Ordinance No. 655 for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Mount Palomar Observatory; and
- **SCMVAP 5.1:** Adhere to the County of Riverside lighting requirements for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.

Ordinance No. 655 was adopted by the County Board of Supervisors on June 7, 1988 and went into effect on July 7, 1988. The intent of Ordinance No. 655 is to restrict the permitted use of certain light fixtures emitting into the night sky undesirable light rays which have a detrimental effect on astronomical observation and research at the Palomar Observatory. Ordinance No. 655 contains approved materials and methods of installation, definitions, general design requirements, requirements for lamp source and shielding, prohibitions and exceptions.

Adherence to Ordinance No. 655 (**Standard Condition SC-AES-2**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. Outdoor lighting sources include: parking lot lights, wall mounted lights and illuminated signage. With conformance with Ordinance No. 655, any impacts are expected to be less than significant from implementation of the Project.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-AES-2 Within the Mt. Palomar Special Lighting Area, as defined in Ordinance No. 655, low pressure sodium vapor lighting or overhead high-pressure sodium vapor lighting with shields or cutoff luminaries, shall be utilized. Any outside lighting shall be hooded and directed so as not to shine directly upon adjoining property or public rights-of-way. The Project will be conditioned that, prior to the issuance of building permits, all new construction which introduces light sources be required to have shielding or other light pollution-limiting characteristics such as hood or lumen restrictions.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS. Would the Project:				
3. Other Lighting Issues. a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
b) Expose residential property to unacceptable light levels?	☐	☐	☒	☐

Source(s): *HVWAP*, Figure 7, *HVWAP Mt. Palomar Nighttime Lighting Policy Area*; *SCMVAP* Figure 5, *SCMVAP Mt. Palomar Nighttime Lighting Policy Area*; *Map My County, (***Appendix A**); and Ordinance No. 655; Ordinance No. 915 (An Ordinance of the County of Riverside Regulating Outdoor Lighting); and **Figure 2, *Aerial Photo with Project Components***.

Findings of Fact:

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

Less Than Significant Impact

Currently, there are no light sources at the Project site. New lighting sources will be created from light and glare associated with construction activities. These additional artificial light sources are typically associated with security lighting since all exterior construction activities are limited to daylight hours in the City. In addition, workers, either arriving to the site before dawn, or leaving the site after dusk, will generate additional construction light sources. The amount and intensity of light anticipated from these construction sources would generally be similar to the lighting of adjacent developed residential areas. Additionally, these impacts will be temporary, of short-duration, and will cease when Project construction is completed.

The Project will result in new sources of light and glare from the addition of residential units, as well as vehicular lighting from cars traveling on adjacent roadways under the proposed Project. Once operational, the Project will be required to comply with Ordinance No. 655 and Ordinance

No. 915, which restricts lighting hours, types, and techniques of lighting. Outdoor lighting sources include: house lights, streetlights, wall mounted lights. Ordinance No. 655 requires the use of low-pressure sodium fixtures and requires hooded fixtures to prevent spillover light or glare, and has been discussed in detail in Section 2.a, above.

Ordinance No. 915 requires all outdoor luminaires to be located, adequately shielded, and directed such that no direct light falls outside the parcel of origin, onto the public right-of-way. Ordinance No. 915 also prohibits blinking, flashing and rotating outdoor luminaires, with a few exceptions. The Project will be required to comply with the County of Riverside conditions of approval that requires lighting restrictions (**Standard Condition SC-AES-2**, above, and **Standard Condition SC-AES-3**, below). These are typically standard conditions of approval and are not considered unique mitigation pursuant to CEQA. With conformance with Ordinance No. 655 and Ordinance No. 915 (trough adherence to **Standard Condition SC-AES-2** and **Standard Condition SC-AES-3**), any impacts will be less than significant from implementation of the Project.

No additional analysis will be required in the EIR.

b) Would the Project expose residential property to unacceptable light levels?

Less Than Significant Impact

The closest existing residences are located 581 feet immediately to the east of the Project site, 297 feet west of the Project site and 354 feet southwest of the Project site. As discussed in Threshold 2.a., above, construction impacts will be temporary, of short-duration, and will cease when Project construction is completed. Once inhabited, lighting will be required to be in conformance with Ordinance No. 655, and Ordinance No. 915. Any impacts will be less than significant with the incorporation of **Standard Condition SC-AES-2** and **Standard Condition SC-AES-3**.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-AES-2 Within the Mt. Palomar Special Lighting Area, as defined in Ordinance No. 655, low pressure sodium vapor lighting or overhead high-pressure sodium vapor lighting with shields or cutoff luminaries, shall be utilized. Any outside lighting shall be hooded and directed so as not to shine directly upon adjoining property or public rights-of-way. The Project will be conditioned that, prior to the issuance of building permits, all new construction which introduces light sources be required to have shielding or other light pollution-limiting characteristics such as hood or lumen restrictions.

SC-AES-3 The Project shall comply with Ordinance No. 915 which requires all outdoor luminaires to be located, adequately shielded, and directed such that no direct light falls outside the parcel of origin, onto the public right-of-way. Ordinance No. 915 also prohibits blinking, flashing and rotating outdoor luminaires, with a few exceptions. Prior to the issuance of building permits, all new construction which introduces light sources, shall be required to shield any outdoor luminaire by opaque components or materials, such that light rays are limited to the parcel of origin and the light source is not visible from another property or public right-of-way.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE RESOURCES. Would the Project:				
4. Agriculture. a) 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?	☒	☐	☐	☐
b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	☒	☐	☐	☐
c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?	☒	☐	☐	☐
d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☒	☐	☐	☐

Source(s): *Map My County, (***Appendix A**); **Figure 2, *Aerial Photo with Project Components***; Assembly Bill 2881; and Ordinance No. 625 (An Ordinance of the County of Riverside Providing a Nuisance Defense for Certain Agricultural Activities, Operations, and Facilities and Providing Public Notification Thereof).

Findings of Fact:

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?

Potentially Significant Impact

The California Department of Conservation's (CDC) Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to track changes in agricultural land use and to help preserve areas of Important Farmland. It divides the state's land into eight categories based on soil quality and existing agricultural uses to produce maps and statistical data. These are used to help preserve productive farmland and to analyze impacts on farmland. Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are all Important Farmland and are collectively referred to as Important Farmland in this Initial Study. The highest rated Important Farmland is Prime Farmland. Farmland maps are updated and released every two years.

Map My County utilizes the FMMP for its data. According to *Map My County* the proposed Project site is designated as:

- Other Lands;
- Prime Farmland;
- Unique Farmland, Farmland of Local Importance, and Farmland of Statewide Importance (Farmland); and

- Urban-Built Up Land.

The Project will convert these lands to non-agricultural use. The existing General Plan Land Use designations for the Project components are Medium Density Residential (MDR) and Estate Density Residential (EDR). Neither of these are agricultural General Plan Land use designations. The Project site is shown on the maps prepared pursuant to the FMMP of the California Resources Agency as Prime Farmland; Unique Farmland, Farmland of Local Importance, and Farmland of Statewide Importance.

In order to ensure a comprehensive discussion as to whether the Project would 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, this issue will be analyzed in the EIR.

b) Would the Project conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?

Potentially Significant Impact

As stated in Section 4.a, above the zoning classifications for the Project components are:

- One-Family Dwellings (R-1);
- Rural Residential (R-R); and
- Light Agriculture, 2½-acre minimum lot size (A-1-2½).

The Residential Project Site Components are located on two parcels with a R-1 zoning classification. The Project proposes to change this zoning classification to Planned Residential (R-4). Neither of these are an agricultural zoning classification.

The Residential Project Site Components are not located on land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve.

The Off-Site Project Components are located on parcels classified as R-R and A-1-2½, as well as within exiting roadway ROWs. The parcels classified as R-R and A-1-2½ are used for cattle grazing. There is no proposal to change the zoning of the A-1-2½ parcels.

The Off-Site Project Components are not located on land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve.

In order to ensure a comprehensive discussion as to whether the Project would conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve, this issue will be analyzed in the EIR.

c) Would the Project cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?

Potentially Significant Impact

Land zoned for "primarily agricultural purposes" means any land lying within any one of the following zone classifications established by the Riverside County Land Use Ordinance, Ordinance No. 348:

- A-1 Zone (Light Agriculture);

- A-P Zone (Light Agriculture with Poultry);
- A-2 Zone (Heavy Agriculture);
- A-D Zone (Agriculture-Dairy); or
- C/V Zone (Citrus/Vineyard).

As stated above in Section IV.b, the Residential Project Site Components are located on two parcels with a R-1 zoning classification and the Project proposes to change this zoning classification to Planned Residential (R-4). The Off-Site Project Components are located on parcels classified as R-R and A-1-2½ and located are also within exiting roadway ROWs.

The demarcation between the R-1 (existing)/R-4 (proposed) and A-1-2½ zoned parcels is Leon Road. Therefore, the Project will cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm").

In order to ensure a comprehensive discussion as to whether the Project would cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm"), this issue will be analyzed in the EIR.

d) 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?

Potentially Significant Impact

In order to ensure a comprehensive discussion as to whether the Project would involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

No standard conditions or requires apply.

Mitigation:

To be determined if necessary in the EIR.

Monitoring:

To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE RESOURCES. Would the Project:				
5. Forest. a) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 122220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g))?	☐	☐	☐	☒
b) Result in the loss of forest land or conversion	☐	☐	☐	☒

of forest land to non-forest use?				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?	☐	☐	☐	☒

Source(s): *Map My County, (***Appendix A**); **Figure 2, *Aerial Photo with Project Components***; and Project Site Visit – April 10, 2018 by Matthew Fagan.

Findings of Fact:

a) 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 Govt. Code section 51104(g))?

No Impact

The Residential Project Site Components are located on two parcels with a R-1 zoning classification. The Project proposes to change this zoning classification to Planned Residential (R-4). The Off-Site Project Components are located on parcels classified as R-R and A-1-2½ and located are also within exiting roadway ROWs.

The surrounding zoning classifications are:

- **Residential Project Site Components:**
  - North: Specific Plan (S-P) – (Specific Plan 293 - Winchester Hills).
  - South: Rural Residential (R-R).
  - East: Rural Residential (R-R) and One-Family Dwellings (R-1).
  - West: Rural Residential (R-R) and Light Agriculture, 5-acre minimum lot size (A-1-5).

- **Off-Site Project Components:**
  - North:
    - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Rural Residential (R-R).
  - South:
    - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Light Agriculture, 2½-acre minimum lot size (A-1-2½).
  - East:
    - County of Riverside: Rural Residential (R-R), One-Family Dwellings (R-1), and Light Agriculture, 2½-acre minimum lot size (A-1-2½).
    - City of Menifee: N/A.
  - West:
    - County of Riverside: Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Menifee East Specific Plan (SP).

Public Resources Code Section 12220(g) identifies forest land as:

"*Land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more*

forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

The Project site and surrounding properties are not currently being defined, zoned, managed, or used as forest land as identified in Public Resources Code Section 12220(g). No impacts will occur.

No additional analysis will be required in the EIR.

b) Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

As discussed in Section 5.a, above, there is no forest land on the Project site or surrounding properties. Therefore, there will be no loss of forest land or conversion of forest land to non-forest use as a result of the Project. No impacts will occur.

No additional analysis will be required in the EIR.

c) Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?

No Impact

There are no other changes in the existing environment, which, due to their location or nature, could result in conversion of *forest land to non-forest use* (other than those discussed in Sections V.a and V.b, above). No impact will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or requirements apply.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY. Would the Project:				
6. Air Quality Impacts. a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐
d) Expose sensitive receptors which are located within 1 mile of the project site to project substantial point source emissions?	☒	☐	☐	☐
e) Involve the construction of a sensitive receptor located within one mile of an existing substantial point source emitter?	☒	☐	☐	☐
f) Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐

Source(s): *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018 (*AQ Analysis*, **Appendix C**); and South Coast Air Quality Management District Final 2016 Air Quality Management Plan.

Note: Any tables or figures in this section are from the *AQ Analysis*, unless otherwise noted.

Findings of Fact:

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact

The Project is located in the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the basin is in nonattainment. As shown in **Table 6-1, *Attainment Status of Criteria Pollutants in the Basin***, below, the Basin is in nonattainment for the following criteria pollutants: ozone [O_3], coarse particulate matter [PM_{10}], and fine particulate matter [$PM_{2.5}$]). These are considered criteria pollutants, because they are three of several prevalent air pollutants known to be hazardous to human health (an area designated as nonattainment for an air pollutant is an area that does not achieve national and/or state ambient air quality standards for that pollutant).

Table 6-1
Attainment Status of Criteria Pollutants in the Basin

Criteria Pollutant	State Designation	Federal Designation
Ozone – 1 hour standard	Nonattainment	Nonattainment (Extreme)
Ozone – 8 hour standard	Nonattainment	Nonattainment (Extreme)
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment (Serious)
Carbon Monoxide (CO)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_X)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_X)	Attainment	Attainment
Lead (Pb)[1]	Attainment	Nonattainment (Partial)

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

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 National Ambient Air Quality Standards (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. The 2016 AQMP incorporates scientific and technological information and planning assumptions, including the Southern California Association of Governments *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS), and updated emission inventory methodologies for various source categories.

In order to ensure a comprehensive discussion as to whether the Project would conflict with or obstruct implementation of the 2016 Air Quality Management Plan, this issue will be analyzed in the EIR.

b) Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact

The County evaluates project air quality emissions based on the quantitative emission thresholds originally established in the SCAQMD's CEQA Air Quality Handbook. SCAQMD's significance thresholds for impacts to regional air quality are shown in **Table 6-2, *SCAQMD Air Quality Significance Thresholds – Mass Daily Thresholds***, below.

Table 6-2
SCAQMD Air Quality Significance Thresholds – Mass Daily Thresholds

Pollutant	Emissions (pounds)	
	Construction	Operational
Oxides of Nitrogen (NO_X)	100	55
Volatile Organic Compounds (VOC)	75	55
Coarse Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_X)	150	150
Carbon Monoxide (CO)	550	550
Lead (Pb)	3	3

The Project has the potential to result in result in emissions of NO_X, VOC, PM_{10}, $PM_{2.5}$, SO_X, CO and Pb, during construction and operations.

Therefore, in order to ensure a comprehensive discussion as to whether the Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation, these issues will be analyzed in the EIR.

c) *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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Potentially Significant Impact

Cumulatively considerable means that the incremental effects the Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. As shown in **Table 6-1**, above, the Basin is in nonattainment for the following criteria pollutants: ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Therefore, in order to ensure a comprehensive discussion as to whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors), this issue will be analyzed in the EIR.

d) *Would the Project expose sensitive receptors which are located within 1 mile of the Project site to project substantial point source emissions?*

Potentially Significant Impact

Sensitive receptor locations near the Project site include existing residential homes in the vicinity of the Project. The nearest sensitive receptors are existing residential homes located 237 feet west of the Project site.

The proposed Project could actively disturb approximately 1.5 acres per day during the site preparation during Phase 1 and 2 and 3.0 acres per day during the grading phase of construction for both Phase 1 and 2. This could result in impacts to adjacent residences for emissions of CO, NO_2, PM_{10}, and $PM_{2.5}$.

Project-related air emissions from on-site sources such as architectural coatings, landscaping equipment, on-site usage of natural gas appliances as well as the operation of vehicles on-site may have the potential to exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

In order to ensure a comprehensive discussion as to whether the Project would involve the expose sensitive receptors which are located within 1 mile of the Project site to project substantial point source emissions, this issue will be analyzed in the EIR.

e) Would the Project involve the construction of a sensitive receptor located within one mile of an existing substantial point source emitter?

Potentially Significant Impact

The Project is located adjacent to agriculturally zoned land and existing uses. In order to ensure a comprehensive discussion as to whether the Project would involve the construction of a sensitive receptor located within one mile of an existing substantial point source emitter, this issue will be analyzed in the EIR.

f) Would the Project create objectionable odors affecting a substantial number of people?

Potentially Significant Impact

Heavy-duty equipment in the Project area during construction will emit odors. Closest residence is located immediately to the west of the Project site (approximately 15 feet).

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts.

An odor control area shall be included as part of the lift station. Said area will include plumbing and electrical for the odor control system. Copper airlines will be piped from the odor control area to a wet well for a compressor that will aerate the wet well. In addition, a PVC line will be provided from the odor control area to a manhole upstream of the wet well that would allow a liquid odor control tank to feed odor control chemicals into the system.

In order to ensure a comprehensive discussion as to whether the Project would create objectionable odors affecting a substantial number of people, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES. Would the Project:				
7. Wildlife & Vegetation. a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	☒	☐	☐	☐
b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?	☒	☐	☐	☐
c) 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. Wildlife Service?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e) 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?	☒	☐	☐	☐
f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Source(s): Ordinance No. 810.2 (An Ordinance of the County of Riverside to Establish the Western Riverside County Multiple Species Habitat Conservation Plan Mitigation Fee); Title 14 of the California Code of Regulations (Sections 670.2 or 670.5); Title 50, Code of Federal Regulations (Sections 17.11 or 17.12); Ordinance No. 559 (An Ordinance of the County of Riverside Regulating the Removal of Trees); and Project Biologist.

Findings of Fact:

a) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

Potentially Significant Impact

The Project study area is within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), which is the adopted Habitat Conservation Plan for the Project site.

Biological resources report(s) will be prepared for the proposed Project, which will identify any potential biological resources that may be located within the Project site. The biological resources report(s) will be prepared pursuant to County of Riverside protocols as it pertains to timing and nature of site surveys. This biological resources report(s) will also determine if the Project will conflict with the provisions of the MSHCP.

The proposed Project is located within the boundary of the adopted Habitat Conservation Plan (HCP) for the endangered Stephens' kangaroo rat (SKR) implemented by the Riverside County Habitat Conservation Agency (RCHCA). The SKR HCP mitigates impacts from development on the SKR by establishing a network of preserves and a system for managing and monitoring them. Through implementation of the SKR HCP, more than $45 million has been dedicated to the establishment and management of a system of regional preserves designed to ensure the persistence of SKR in the plan area. This effort has 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. The proposed Project is located within the SKR HCP area and will be required to comply with applicable provisions of this plan.

The County adopted County of Riverside Ordinance Amendment 663.10, an amendment to Ordinance No. 663, establishing the Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan Fee Assessment Area and Setting Mitigation Fees. The mitigation fees are as follows: All applicants for development permits within the boundaries of the Fee Assessment Area who cannot satisfy mitigation requirements through on-site mitigation as determined through the environmental review process shall pay a Mitigation Fee of $500.00 per gross acre of parcels proposed for development. However, for single-family residential development, wherein all lots within the development are greater than one-half (1/2) acre in size, a Mitigation Fee of $250.00 per residential unit shall be paid; and for agricultural development which requires a development permit excluding the construction of single-family residences in connection with said agricultural development, a Mitigation Fee of $100.00 or one percent (1%) of the valuation of the buildings to be constructed, whichever is greater shall be paid, provided that at no time shall such fee exceed the amount required to be paid if a fee of $500.00 per gross acre were applied to the parcel proposed for agricultural development. The determination of value or valuation of an agricultural building shall be made by the building official.

The Project will be required to pay the applicable SKR Fee. Payment of this fee is a standard condition and is not considered unique mitigation under CEQA.

As outlined in Section 6 of the MSHCP, "Payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife and/or any other appropriate participating regulatory agencies and as set forth in the Implementing Agreement for the MSHCP."

The Western Riverside County Multiple Species Habitat Conservation Plan Mitigation Fee has been established to provide mitigation for biological impacts from projects within the MSHCP area. All building permit applicants may pay their Western Riverside County MSHCP mitigation fees at any time after having an approved land development permit for the County of Menifee

Planning Division (ex: conditional use permit, public use permit, plot plan) and have also paid for building permit plan review or permit fees.

The Project will be required to pay the applicable MSHCP Fee. Payment of this fee is a standard condition and is not considered unique mitigation under CEQA.

There is no Natural Conservation Community Plan, or other approved local, regional, or state conservation plan that is applicable to the Project site.

In order to ensure a comprehensive discussion as to whether the Project would conflict with the provisions of the MSHCP (adopted Habitat Conservation Plan), this issue will be analyzed in the EIR.

b) *Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?*

Potentially Significant Impact

Biological resources report(s) will be prepared for the proposed Project, which will identify any potential biological resources that may be located within the Project site. This includes endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12), as applicable for the biology on the Project site. The biological resources report(s) will be prepared pursuant to appropriate protocols as it pertains to timing and nature of site surveys. This biological resources report(s) will also determine if the Project will have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12).

Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) pertains to "Plants of California Declared to Be Endangered, Threatened or Rare," and "Animals of California Declared To Be Endangered or Threatened," respectively.

Title 50, Code of Federal Regulations (Sections 17.11 or 17.12) pertains to "Endangered and threatened wildlife," and "Endangered and threatened plants," respectively.

In order to ensure a comprehensive discussion as to whether the Project would have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12), as applicable, this issue will be analyzed in the EIR.

c) *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 Wildlife or U. S. Wildlife Service?*

Potentially Significant Impact

Biological resources report(s) will be prepared for the proposed Project, which will identify any potential biological resources that may be located within the Project site. This includes 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 Wildlife or U. S. Wildlife Service, as applicable for the biology on the Project site. The biological resources report(s) will be prepared pursuant to appropriate protocols as it pertains to timing and nature of site surveys. This biological resources report(s) will also determine if the Project will have a substantial adverse effect, either directly or through habitat modifications, on these species.

In order to ensure a comprehensive discussion as to whether the Project would 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 Wildlife or U. S. Wildlife Service, as applicable for the biology on the Project site, this issue will be analyzed in the EIR.

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?*

Potentially Significant Impact

The Project study area has the potential to support songbird and raptor nests due to the presence of shrubs, ground cover, and trees on-site. Nesting activity typically occurs from February 15 to August 31. Disturbing or destroying active nests is a violation of the MBTA (16 U.S.C. 703 et seq.). In addition, nests and eggs are protected under Fish and Wildlife Code Section 3503. As such direct impacts to breeding birds (e.g. through nest removal) or indirect impacts (e.g. by noise causing abandonment of the nest) is considered a potentially significant impact. The Project will be required to comply with the MBTA.

Biological resources report(s) will be prepared for the proposed Project, which will identify any potential biological resources that may be located within the Project site. This includes 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, as applicable for the biology on the Project site. The biological resources report(s) will be prepared pursuant to appropriate protocols as it pertains to timing and nature of site surveys. This biological resources report(s) will also determine if the Project will 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.

In order to ensure a comprehensive discussion as to whether the Project would 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, as applicable for the biology on the Project site, this issue will be analyzed in the EIR.

e) *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 Wildlife or U. S. Fish and Wildlife Service?*

Potentially Significant Impact

Biological resources report(s) will be prepared for the proposed Project, which will identify any potential biological resources that may be located within the Project site. This includes riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service, as applicable for the biology on the Project site. The biological resources report(s) will

be prepared pursuant to appropriate protocols as it pertains to timing and nature of site surveys. This biological resources report(s) will also determine if the Project will have a substantial adverse effect, either on riparian habitat or any other sensitive natural community.

In order to ensure a comprehensive discussion as to whether the Project would 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 Wildlife or U. S. Fish and Wildlife Service, as applicable for the biology on the Project site, this issue will be analyzed in the EIR.

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

Potentially Significant Impact

Biological resources report(s) will be prepared for the proposed Project, which will identify any potential biological resources that may be located within the Project site. This includes federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), as applicable for the biology on the Project site. The biological resources report(s) will be prepared pursuant to appropriate protocols as it pertains to timing and nature of site surveys. This biological resources report(s) will also determine if the Project will have a substantial adverse effect on these wetlands through direct removal, filling, hydrological interruption, or other means.

In order to ensure a comprehensive discussion as to whether the Project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means, as applicable for the biology on the Project site, this issue will be analyzed in the EIR.

g) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact

There are no oak trees on the Project site. The County's Oak Tree Management Guidelines would not be applicable. The provisions of Ordinance No. 559 would not apply since the Project site is not above 5,000 feet in elevation. No other tree preservation policy or ordinance apply.

Therefore, implementation of the Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES. Would the Project:				
8. Historic Resources. a) Alter or destroy an historic site?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5?	☒	☐	☐	☐

Source(s): Public Resources Code (PRC) §5020.1(j); and Title 14 California Code of Regulations (CCR) §15064.5(a)(1)-(3)).

Findings of Fact:

a) Would the Project alter or destroy an historic site?

Potentially Significant Impact

A cultural resources report will be prepared for the proposed Project, which will identify any potential historical resources that may be located within the Project site. The cultural resources report will be prepared pursuant to County of Riverside protocol, which will include archival research (literature and records search), historic research, and a site survey. This cultural resources report will also determine if the Project will alter or destroy an historic site.

In order to determine if implementation of the Project will alter or destroy an historic site, this issue will be analyzed in the DEIR.

b) Would the Project cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5?

Potentially Significant Impact

A cultural resources report will be prepared for the proposed Project, which will identify any potential historical resources that may be located within the Project site. The cultural resources report will be prepared pursuant to County of Riverside protocol, which will include archival research (literature and records search), historic research, and a site survey. This cultural resources report will also determine if any potential historic resources (if identified) are deemed as significant, as defined in *California Code of Regulations, Section 15064.5.*

According to Public Resources Code (PRC) §5020.1(j), "'historical resource' includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

The California Environmental Quality Act (CEQA) guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "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" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. 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.
4. Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

In order to determine if implementation of the Project will cause a substantial adverse change in the significance of a historical resource as defined in *California Code of Regulations, Section 15064.5*, this issue will be analyzed in the DEIR.

Standard Conditions and Requirements:

No standard conditions or requirements are applicable.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES. Would the Project:				
9. Archaeological Resources. a) Alter or destroy an archaeological site?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
d) Restrict existing religious or sacred uses within the potential impact area?	☒	☐	☐	☐

Source(s): Public Resources Code (PRC) §5020.1(j); Title 14 California Code of Regulations (CCR) §15064.5(a)(1)-(3)); and Assembly Bill 52.

Findings of Fact:

a) Would the Project alter or destroy an archaeological site?

Potentially Significant Impact

A cultural resources report will be prepared for the proposed Project, which will identify any potential archaeological resources that may be located within the Project site. The cultural resources report will be prepared pursuant to County of Riverside protocol, which will include archival research (literature and records search), historic research, and a site survey. This

cultural resources report will also determine if the Project will alter or destroy an archaeological site.

In order to determine if implementation of the Project will alter or destroy an archaeological site, this issue will be analyzed in the DEIR.

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?

Potentially Significant Impact

A cultural resources report will be prepared for the proposed Project, which will identify any potential archaeological resources that may be located within the Project site. The cultural resources report will be prepared pursuant to County of Riverside protocol, which will include archival research (literature and records search), historic research, and a site survey. This cultural resources report will also determine if any potential archaeological resources (if identified) are deemed as significant, as defined in *California Code of Regulations, Section 15064.5.*

According to Section 15064.5(c):

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in State CEQA Guidelines Section 15064.5(a);
- If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and Section 15064.5(c). Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply;
- If an archaeological site does not meet the criteria defined in Section 15064.5(a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2; and
- If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment.

In order to determine if implementation of the Project will cause a substantial adverse change in the significance of a historical resource as defined in *California Code of Regulations, Section 15064.5*, this issue will be analyzed in the DEIR.

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact

Project implementation will require excavation on previously disturbed sites in an area that was occupied during the prehistoric and historic period. Due to historic human presence, activity, and use of the Project site, the potential for buried human remains to be disturbed is considered low. However, if human remains are encountered during construction, all work shall cease, and the Riverside County Coroner's Office shall be contacted pursuant to procedures set forth in Section 7050.5 of the Health and Safety Code. Standard Condition **SC-CUL-1** is required to reduce potentially significant impacts to previously unknown human remains that may be unexpectedly discovered during Project implementation to a less than significant level. **SC-CUL-1** requires that in the unlikely event that human remains are uncovered the contractor is

required to halt work in the immediate area of the find and to notify the County Coroner, in accordance with Health and Safety Code § 7050.5. **SC-CUL-**1 is not considered unique mitigation under CEQA. Any impacts will be considered less than significant with adherence to **SC-CUL-1**.

No additional analysis will be required for this issue in the EIR.

d) Would the Project restrict existing religious or sacred uses within the potential impact area?

Potentially Significant Impact

A cultural resources report will be prepared for the proposed Project, which will identify any potential religious or sacred uses that may be located within the Project site. The cultural resources report will be prepared pursuant to County of Riverside protocol. This cultural resources report will include a scared lands file search and tribal scoping which will also determine if the Project will restrict any existing religious or sacred uses within the Project site.

Through the preparation of the cultural resources report, and the AB52 process, it will be determined if any religious or sacred uses are identified within the Project site. In order to determine if implementation of the Project will restrict existing religious or sacred uses within the potential impact area, this issue will be analyzed in the DEIR.

Standard Conditions and Requirements:

SC-CUL-1 If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
10. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones. a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death?	☐	☐	☐	☒
b) Be subject to 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?	☐	☐	☐	☒

Source(s): *General Plan* Figure S-2, *Earthquake Fault Study Zones*, (p. S-15); *Map My County, (***Appendix A**); and *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**).

Note: Any tables or figures in this section are from the *Geo Investigation*, unless otherwise noted.

Findings of Fact:

a) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to being located within an Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones?

No Impact

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. There are no faults geologically mapped within or projecting toward the Project site and the Project site is not within a County Fault Hazard Zone. No impacts will occur.

No additional analysis will be required in the EIR.

b) Would the Project be subject to 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?

No Impact

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known fault lines are present on or adjacent to the Project site.

The nearest known faults to the Project site are shown in **Table 10-1, *Regional Faults in the Vicinity of the Project Site that are Capable of Producing a Moment Magnitude Exceeding 6.0***, below, with the closest fault, the Elsinore-Temecula Fault, being 10.5 miles away from the Project site.

Table 10-1
Regional Faults in the Vicinity of the Project Site that are Capable of Producing a Moment Magnitude Exceeding 6.0

Fault Name	Approximate Distance (miles/kilometers)	Maximum Magnitude	Slip Rate (millimeters/year)
Elsinore – Temecula	10.5/16.9	6.8	5.00
San Jacinto – San Jacinto Valley	11.67/18.8	6.9	12.00
San Jacinto – Anza	12.4/20.0	7.2	12.00
Elsinore – Glen Ivy	13.5/21.7	6.8	5.00
Elsinore – Julian	20.9/33.7	7.1	5.00
San Jacinto – San Bernardino	25.1/40.4	6.7	12.00
San Andreas	27.5/44.2	7.4	24.00

Therefore, there is no potential for rupture of a known 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 on the Project site. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
11. Liquefaction Potential Zone. a) Be subject to seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Source(s): *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**); and Ordinance No. 457 (An Ordinance of the County of Riverside Relating to the Building Requirements and Adopting the 1997 Edition of The Uniform Administrative Code Adopted by The International Conference of Building Officials; The 2001 California Building Code Including the Appendix and Standards Adopted by The California Building Standards Commission; the 1997 Edition of The Uniform Housing Code Adopted by The International Conference Of Building Officials; the 1997 Edition of The Uniform Code For The Abatement Of Dangerous Buildings Adopted by The International Conference of Building Officials; the 2001 California Plumbing Code, including the Appendix and Standards Adopted by The California Building Standards Commission; the 2001 California Mechanical Code, including the appendix and Standards Adopted by The California Building Standards Commission;

the 2000 Edition Of The Uniform Swimming Pool, Spa and Hot Tub Code Adopted by The International Association of Plumbing and Mechanical Officials; the 2001 California Electrical Code Adopted by The California Building Standards Commission; the 1997 Edition of The Uniform Sign Code Adopted by The International Conference of Building Officials; and The 1997 Edition of The Code for Building Conservation Adopted by The International Conference Of Building Officials as the Standards of Said Ordinance).

Findings of Fact:

a) Would the Project be subject to seismic-related ground failure, including liquefaction?

Less Than Significant Impact

Liquefaction commonly occurs when three conditions are present simultaneously: (1) high groundwater; (2) relatively loose, cohesionless (sandy) soil; and (3) earthquake-generated seismic waves. The presence of these conditions may cause a loss of shear strength and, in many cases, the settlement of subsurface soils.

No groundwater was encountered in any of the test pits that were excavated at the site to a maximum depth of 9' below existing grade or the borings that were excavated to 21' below existing grade. No groundwater was encountered by previous consultants in borings excavated to 50' below existing grade in 2004. Therefore, groundwater is not considered "high."

The Project site is underlain by the following soils, as shown on **Figure 11-1, *Geotechnical Map***:

- Topsoil/Disturbed Native Soils (Af);
- Native Alluvial Soil (Qof_a); and
- Quartz Diorite (Kdvg).

These three (3) soils are described in greater detail, below. Please reference **Figures 11-2a, *Boring Locations for the Residential Project Site Components***, and **11-2b, *Boring Locations for the Off-Site Project Components***, which correspond to the descriptions, below.

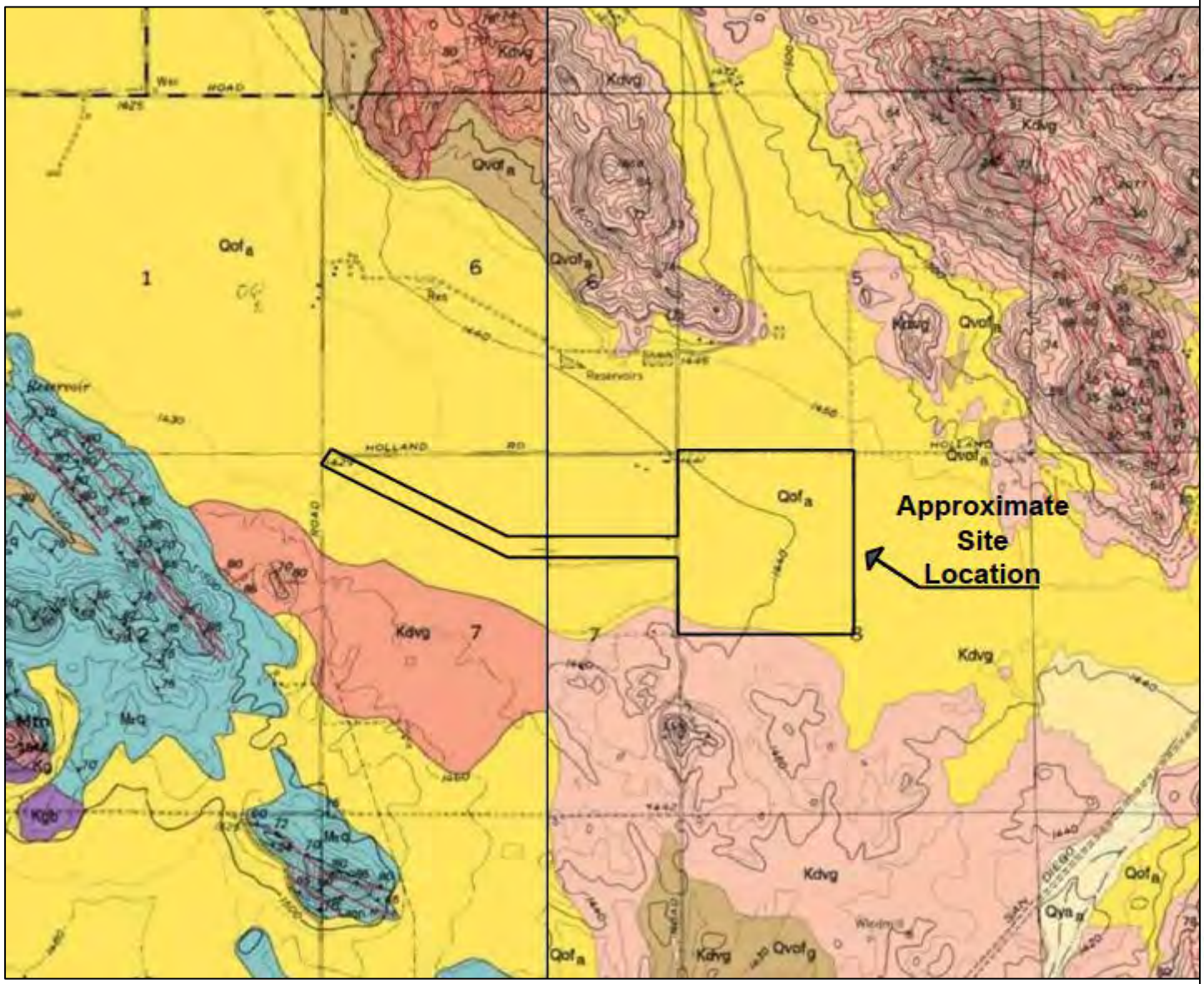
1. Topsoil/Disturbed Native Soil (Af).

Tilled agricultural topsoil was exposed in all borings and test pits throughout the Project site to a depth of approximately 2'-3' below existing ground surface. The topsoil consists of light brown, silty fine sand that contains small quantities of organics from fertilization. The maximum depth of topsoil/fill encountered was 3'.

2. Native Alluvial Soil (Qof_a).

Native soil, exposed in all 4 test pits and 5 exploratory borings, as well as the 26 test pits and 19 borings excavated by previous consultants, consists of reddish brown to dark brown, clayey fine to medium sand that is in a moist to damp and dense to very dense condition, and grades to coarser material at depth. Minor porosity was observed in more clayey materials. Maximum depth of soil encountered during the site investigation was 21', and maximum depth documented in reports by previous consultants is 50'.

Figure 11-1
Geotechnical Map



DESCRIPTION OF MAP UNITS

VERY YOUNG SURFICIAL DEPOSITS—Sediment recently transported and deposited in channels and washes, on surfaces of alluvial fans and alluvial plains, and on hillslopes. Soil-profile development is non-existent. Includes:

Qw — **Very young wash deposits (late Holocene)**—Unconsolidated bouldery to sandy alluvium of active and recently active washes

Qv — **Very young alluvial valley deposits (late Holocene)**—Active and recently active fluvial deposits along valley floors. Consists of unconsolidated sandy, silty, or clay-bearing alluvium

YOUNG SURFICIAL DEPOSITS—Sedimentary units that are slightly consolidated to cemented and slightly to moderately dissected. Alluvial fan deposits (Qyf series) typically have high coarse:fine clast ratios. Younger surficial units have upper surfaces that are capped by slight to moderately developed pedogenic-soil profiles (A/C to A/AC/$B_{cambric}C_{ox}$ profiles). Includes:

Qyf — **Young alluvial fan deposits (Holocene and late Pleistocene)**—Unconsolidated deposits of alluvial fans and headward drainages of fans. Consists predominately of gravel, sand, and silt. Trunk drainages and proximal parts of fans contain higher percentage of coarse-grained sediment than distal parts. Restricted to small area north of Double Butte

Qya — **Young alluvial channel deposits (Holocene and late Pleistocene)**—Fluvial deposits along canyon floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

Qyv — **Young alluvial valley deposits (Holocene and late Pleistocene)**—Fluvial deposits along valley floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium

OLD SURFICIAL DEPOSITS—Sedimentary units that are moderately consolidated and slightly to moderately dissected. Older surficial deposits have upper surfaces that are capped by moderately to well-developed pedogenic soils (A/AB/B/C_{ox} profiles and Bt horizons as much as 1 to 2 m thick and maximum hues in the range of 10YR 5/4 and 6/4 through 7.5YR 6/4 to 4/4 and mature Bt horizons reaching 5YR 5/6). Includes:

Qof — **Old alluvial fan deposits (late to middle Pleistocene)**—Reddish brown, gravel and sand alluvial fan deposits; indurated, commonly slightly dissected. In places includes thin alluvial fan deposits of Holocene age

Qoa — **Old alluvial channel deposits (late to middle Pleistocene)**—Fluvial sediments deposited on canyon floors. Consists of moderately indurated, commonly slightly dissected gravel, sand, silt, and clay-bearing alluvium. Locally capped by thin, discontinuous alluvial deposits of Holocene age. Restricted to single occurrance north of Railroad Canyon Reservoir

VERY OLD SURFICIAL DEPOSITS—Sediments that are slightly to well consolidated to indurated, and moderately to well dissected. Upper surfaces are capped by moderate to well developed pedogenic soils (A/AB/B/C_{ox} profiles having Bt horizons as much as 2 to 3 m thick and maximum hues in the range of 7.5YR 6/4 and 4/4 to 2.5YR 5/6)

Qvof — **Very old alluvial fan deposits (middle to early Pleistocene)**—Mostly well-dissected, well-indurated, reddish-brown alluvial fan deposits. Grain size chiefly sand and gravel

Qvoa — **Very old alluvial channel deposits (middle to early Pleistocene)**—Fluvial sediments deposited on canyon floors. Consists of moderately to well-indurated, reddish-brown, mostly very dissected gravel, sand, silt, and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age. Deposits in Quail Valley area contain rounded cobbles

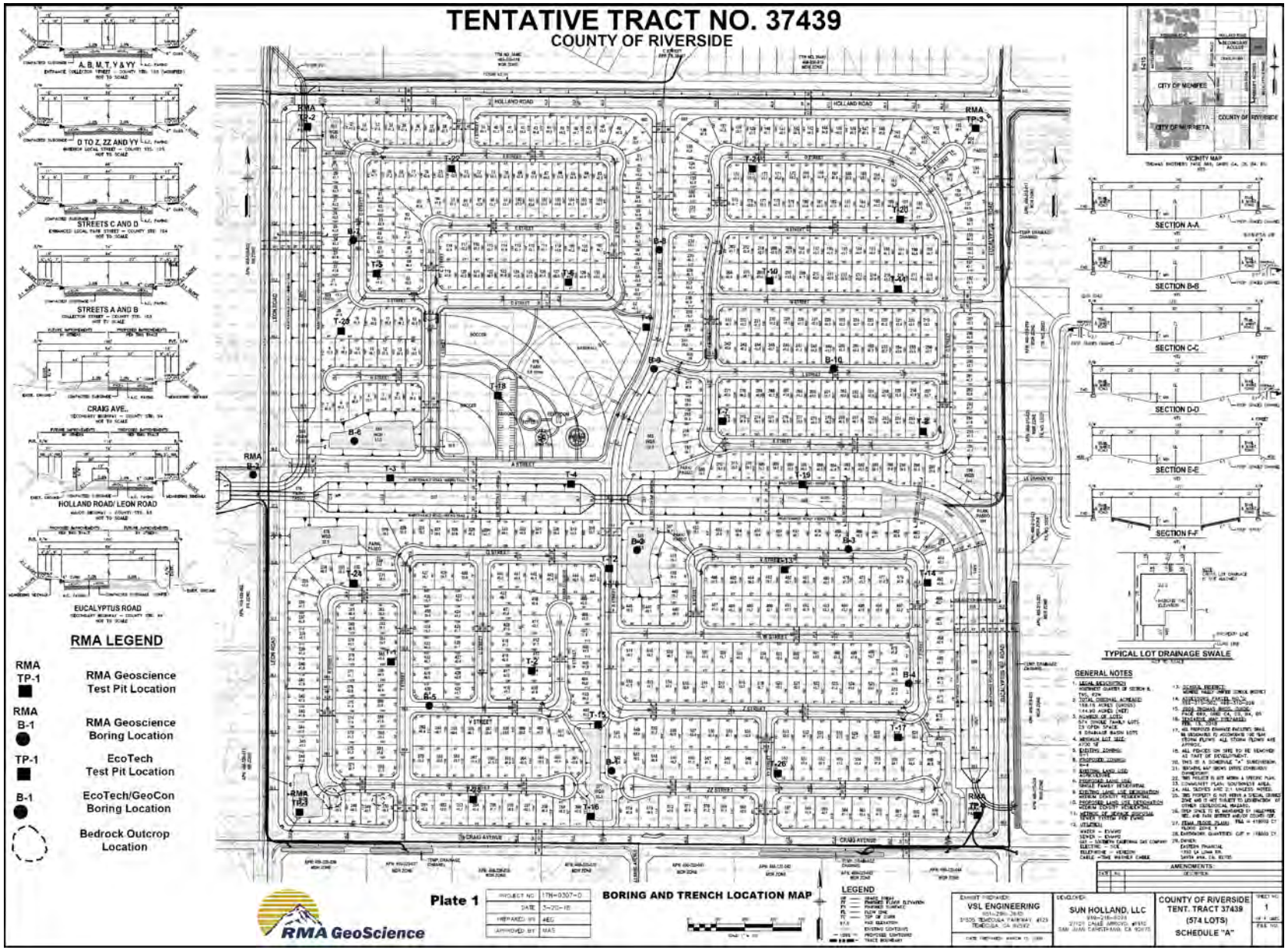
Kgb — **Gabbro (Cretaceous)**—Mainly hornblende gabbro. Includes Virginia quartz-norite and gabbro of Dudley (1935), and San Marcos gabbro of Larsen (1948). Typically brown-weathering, medium-to very coarse-grained hornblende gabbro; very large poikilitic hornblende crystals are common, and very locally gabbro is pegmatitic. Much is quite heterogeneous in composition and texture. Includes noritic and dioritic composition rocks

Kdvg — **Granodiorite to tonalite**—Relatively uniform, massive hornblende biotite granodiorite grading into tonalite. Principal rock type of Domenigoni Valley pluton. Contains some mafic rich rocks in southern part of pluton. Common accessory minerals are zircon, sphene, apatite, and magnetite-ilmenite. Minute rutile crystals impart bluish opalescence to quartz. Small masses of epidote and (or) tourmaline rock occur locally and appear to replace granodiorite to tonalite. Contains moderately abundant to abundant equant mafic inclusions. Zircon age is 117.8 Ma_{U} and 112.8 Ma_{Pb} (pers comm W. Premo) and $^{40}Ar/^{39}Ar$ age of 104 Ma for biotite and 95.5 Ma for potassium feldspar

Mrq — **Quartz-rich rocks (Mesozoic)**—Quartzite and quartz-rich metasandstone

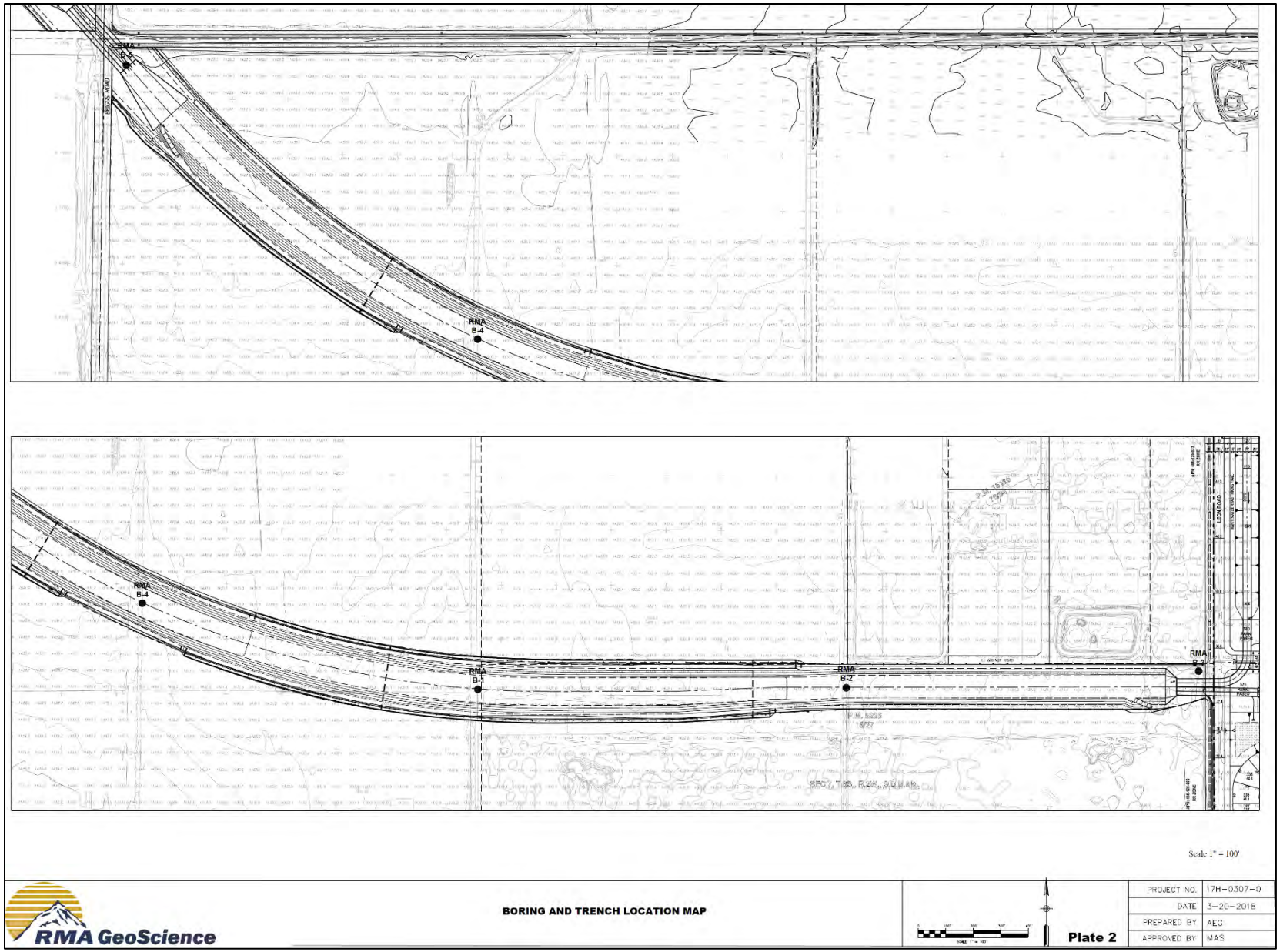
Source: Project Geologist sent April 30, 2018

Figure 11-2a
Boring Locations for the Residential Project Site Components



Source: Project Geo Report 3-2018 (**Appendix E**)

Figure 11-2b
Boring Locations for the Off-Site Project Components



Source: Project Geo Report 3-2018 (**Appendix E**)

3. Quartz Diorite (Kdvg).

Bedrock was not encountered in test pits or borings but is exposed at the surface in the southwest corner of the site, and highly weathered bedrock is documented at a depth of 35'. The bedrock consists of light gray to whitish gray, medium-grained quartz diorite. The rock is mostly massive with some minor fracturing on the exposed face and was slowly excavated by a backhoe with considerable difficulty.

Due to the dense, cohesive soils underlying the site and lack of groundwater encountered to at least 50' below ground surface, liquefaction potential is considered minimal.

California Building Code (CBC) requirements (as implemented through Ordinance No. 457) pertaining to new development and construction will minimize the potential for structural failure or loss of life during earthquakes by ensuring that structures are constructed pursuant to applicable seismic design criteria for the region. This is reflected in **Standard Condition SC-GEO-1**, below. CBC requirements are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes. In addition, **Standard Condition SC-GEO-2**, below, requires compliance with the *Geo Investigation*.

With adherence to **Standard Condition SC-GEO-1** and **Standard Condition SC-GEO-2**, any potential impacts to the Project from seismic-related ground failure, including liquefaction, will be reduced to less than significant level.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-GEO-1 The Project shall comply with the most recent version of Ordinance 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.

SC-GEO-2 Prior to the issuance of a grading and/or building permit, the Project applicant shall submit plans that demonstrate compliance with the geotechnical conclusions and recommendations contained in the *Geo Investigation* as it pertains to:

- General Earthwork and Grading;
- Earthwork Shrinkage and Subsidence;
- Removal Recommendations;
- Slopes;
- Seismic Design Parameters;
- Liquefaction and Secondary Earthquake Hazards;
- Foundations;
- Lateral Load Resistance;
- Interior Slab on Grade;
- Miscellaneous Concrete Flatwork;
- Cement Type and Corrosion Potential;
- Temporary Slopes;
- Utility Trench Backfill;
- Preliminary Pavement Sections;

- Drainage and Moisture Proofing;
- Geotechnical Observations;
- Plan Review; and
- On-Site Stormwater Disposal.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
12. Ground-shaking Zone. a) Be subject to strong seismic ground shaking?	☐	☐	☒	☐

Source(s): *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**); and Ordinance No. 457.

Findings of Fact:

a) *Would the Project be subject to strong seismic ground shaking?*

Less Than Significant Impact

The proposed Project will be subject to ground shaking impacts should a major earthquake in the area occur. Potential impacts include injury or loss of life and property damage. The Project site is subject to strong seismic ground shaking as are virtually all properties in Southern California.

The Project the site is not located within an Alquist-Priolo Earthquake Fault Zone, and there are not any known faults (active, potentially active, or inactive) on-site. As shown in **Table 10-1**, above, the closest active fault, the Elsinore-Temecula Fault, is located 10.5 miles away from the Project site.

California Building Code (CBC) requirements (as implemented through Ordinance No. 457) pertaining to new development and construction will minimize the potential for structural failure or loss of life during earthquakes by ensuring that structures are constructed pursuant to applicable seismic design criteria for the region. This is reflected in **Standard Condition SC-GEO-1**, below. CBC requirements are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes. In addition, **Standard Condition SC-GEO-2**, below, requires compliance with the *Geo Investigation*.

With adherence to **Standard Condition SC-GEO-1** and **Standard Condition SC-GEO-2**, any exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, would be reduced to less than significant level.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-GEO-1 The Project shall comply with the most recent version of Ordinance 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.

SC-GEO-2 Prior to the issuance of a grading and/or building permit, the Project applicant shall submit plans that demonstrate compliance with the geotechnical conclusions and recommendations contained in the *Geo Investigation* as it pertains to:

- General Earthwork and Grading;
- Earthwork Shrinkage and Subsidence;
- Removal Recommendations;
- Slopes;
- Seismic Design Parameters;
- Liquefaction and Secondary Earthquake Hazards;
- Foundations;
- Lateral Load Resistance;
- Interior lab on Grade;
- Miscellaneous Concrete Flatwork;
- Cement Type and Corrosion Potential;
- Temporary Slopes;
- Utility Trench Backfill;
- Preliminary Pavement Sections;
- Drainage and Moisture Proofing;
- Geotechnical Observations;
- Plan Review; and
- On-Site Stormwater Disposal.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
13. Landslide Risk. a) 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, collapse, or rockfall hazards?	☐	☐	☒	☐

Source(s): *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**); and Ordinance No. 457.

Findings of Fact:

a) 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, collapse, or rockfall hazards?

Less Than Significant Impact

The *Geo Investigation* did not identify any on- or off-site landslide, or rockfall hazards. The topography surrounding the Project site to the north, south, east and west are similar to that of the Project. Based on a review of **Figure 11-1, *Geotechnical Map***, soil characteristics for properties adjacent to the Project site are anticipated to be similar to the to that of the Project to the north, east and west Native Alluvial Soil (Qof_a), with Quartz Diorite/bedrock (Kdvg) to the south. Any steeper slopes are located approximately 0.37 miles to the north of the Project site and 1.0 miles northeast of the Project site. These are located at a distance far enough from the Project site such that they will not pose any off-site landslide, or rockfall hazards.

Lateral Spreading is defined as lateral movement of soil, often as a result of liquefaction during an earthquake. As discussed in Section 11, above, due to the dense, cohesive soils underlying the site and lack of groundwater encountered to at least 50' below ground surface, liquefaction potential is considered minimal.

Hydroconsolidation or soil collapse typically occurs in recently deposited, Holocene-age soils that accumulated in an arid or semiarid environment. Soils prone to collapse are commonly associated with alluvial fan and debris flow sediments deposited during flash floods. These soils are typically dry and contain minute pores and voids. When collapsible soils become saturated, their grains are rearranged and lose cementation, resulting in substantial and rapid settlement under relatively light loads. An increase in surface water infiltration, such as from irrigation, or a rise in the groundwater table, combined with the weight of a building or structure, can initiate rapid settlement and cause foundations and walls to crack. Typically, differential settlement of structures occurs when landscaping is heavily irrigated near the structure's foundation.

California Building Code (CBC) requirements (as implemented through Ordinance No. 457) pertaining to new development and construction will minimize the potential for structural failure or loss of life during earthquakes by ensuring that structures are constructed pursuant to applicable seismic design criteria for the region. This is reflected in **Standard Condition SC-GEO-1**, below. CBC requirements are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes. In addition, **Standard Condition SC-GEO-2**, below, requires compliance with the *Geo Investigation*.

With adherence to **Standard Condition SC-GEO-1** and **Standard Condition SC-GEO-2**, any exposure of people or structures to lateral spreading, or collapse, would be reduced to less than significant level.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-GEO-1 The Project shall comply with the most recent version of Ordinance 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.

SC-GEO-2 Prior to the issuance of a grading and/or building permit, the Project applicant shall submit plans that demonstrate compliance with the geotechnical conclusions and recommendations contained in the *Geo Investigation* as it pertains to:

- General Earthwork and Grading;
- Earthwork Shrinkage and Subsidence;
- Removal Recommendations;
- Slopes;
- Seismic Design Parameters;
- Liquefaction and Secondary Earthquake Hazards;
- Foundations;
- Lateral Load Resistance;
- Interior Slab on Grade;
- Miscellaneous Concrete Flatwork;
- Cement Type and Corrosion Potential;
- Temporary Slopes;
- Utility Trench Backfill;
- Preliminary Pavement Sections;
- Drainage and Moisture Proofing;
- Geotechnical Observations;
- Plan Review; and
- On-Site Stormwater Disposal.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
14. Ground Subsidence. a) 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 ground subsidence?	☐	☐	☒	☐

Source(s): *General Plan Safety Element*; *General Plan* Figure S-7 Documented Subsidence Areas Map, (p. S-29); *Map My County, (***Appendix A**); *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**).

Findings of Fact:

a) 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 ground subsidence?

Less Than Significant Impact

Subsidence refers to the sudden sinking or gradual downward settling and compaction of soil and other surface material with little or no horizontal motion. It may be caused by a variety of human and natural activities, including earthquakes.

Subsidence typically occurs throughout a susceptible valley. In addition, differential displacement and fissures occur at or near the valley margin, and along faults. In the County of Riverside, the worst damage to structures as a result of regional subsidence may be expected at the valley margins. Alluvial valley regions are especially susceptible.

As discussed in Section 11, Liquefaction Potential Zones, above, the Project site s underlain with Topsoil/Disturbed Native Soil (Af), Native Alluvial Soil (Qof_a), and Quartz Diorite (Kdvg). Since the site is underlain by dense, cohesive alluvial soils, seismically induced settlement is considered a minimal design concern during a design seismic event.

California Building Code (CBC) requirements (as implemented through Ordinance No. 457) pertaining to new development and construction will minimize the potential for structural failure or loss of life during earthquakes by ensuring that structures are constructed pursuant to applicable seismic design criteria for the region. This is reflected in **Standard Condition SC-GEO-1**, below. CBC requirements are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes. In addition, **Standard Condition SC-GEO-2**, below, requires compliance with the *Geo Investigation*.

With adherence to **Standard Condition SC-GEO-1** and **Standard Condition SC-GEO-2**, should 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 ground subsidence, any impacts would be reduced to less than significant level.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-GEO-1 The Project shall comply with the most recent version of Ordinance 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.

SC-GEO-2 Prior to the issuance of a grading and/or building permit, the Project applicant shall submit plans that demonstrate compliance with the geotechnical conclusions and recommendations contained in the *Geo Investigation* as it pertains to:

- General Earthwork and Grading;
- Earthwork Shrinkage and Subsidence;
- Removal Recommendations;
- Slopes;
- Seismic Design Parameters;
- Liquefaction and Secondary Earthquake Hazards;
- Foundations;
- Lateral Load Resistance;
- Interior lab on Grade;
- Miscellaneous Concrete Flatwork;
- Cement Type and Corrosion Potential;
- Temporary Slopes;
- Utility Trench Backfill;
- Preliminary Pavement Sections;

- Drainage and Moisture Proofing;
- Geotechnical Observations;
- Plan Review; and
- On-Site Stormwater Disposal.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
15. Other Geologic Hazards. a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?	☐	☐	☐	☒

Source(s): Google Maps; and **Figure 2, *Aerial Photo with Project Components***

Findings of Fact:

a) Would the Project be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?

No Impact

The Project site is located approximately 32 miles from the nearest coastline; therefore, the negligible risk associated with tsunamis is not a design consideration. In addition, the site not located adjacent to a body of water; therefore, seiches are not a design consideration for the site. Based on this information, implementation of the proposed Project would not be subject to geologic hazards, such as tsunami, or seiche. There are no volcanic hazards in proximity of the Project site. Any mudflows associated with a tsunami, seiche, or volcanic hazards are not applicable to the Project. The proposed trapezoidal earthen channel on the Project site will convey flows from easterly of the Project onto any proposed trapezoidal earthen channel on the Nautical Cove Project (TTM 31229) and ultimately flow into the easterly lake of the Summerhouse residential community, south of Tres Lagos Drive. It is not anticipated that any mudflows would be conveyed in this channel. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
16. Slopes.	☐	☐	☒	☐
a) Change topography or ground surface relief features?				
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?	☐	☐	☐	☒
c) Result in grading that affects or negates subsurface sewage disposal systems?	☐	☐	☐	☒

Source(s): *Map My County, (***Appendix A**); *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**); Ordinance No. 457; and **Figure 6, *TTM 37439 Conceptual Grading Plan***.

Findings of Fact:

a) Would the Project change topography or ground surface relief features?

Less Than Significant Impact

The Project rough grading will involve approximately 175,811 cubic yards (CY) of cut and 418,339 CY of fill. Lot spoil dirt from house foundations, wall footings, driveways, and utilities will generate approximately 72,000 CY of cut. Excavation to create the off-site Holland Channel will generate the remaining 170,528 CY of dirt needed to balance the site.

The site currently ranges in elevation from approximately 1,434 feet above mean sea level (AMSL) on the western side of the Project site to 1,445 AMSL in the northeastern corner of the site.

When graded, the Project will range in elevation from a high of 1,447 AMSL at the intersection of Holland Road and Eucalyptus Road to a low elevation of 1,427 AMSL at the bottom of the Holland Channel where it crosses Leon Road. This demonstrates that the range of site elevation variations will widen from 11' to 20' to facilitate the development of the Project. In order to accomplish this, graded slopes will be utilized to form the graded drainage channel that traverses the central and southeastern portions of the site. Perimeter streets on all four sides will match the grade of surrounding properties and projects.

The Project will therefore change the topography and surface relief features. These changes will be required in order to re-contour the Project topography in a manner to accommodate single-family residential homes, roadways, private open space, landscaping and drainage/water quality facilities (including the trapezoidal earthen drainage channel). As designed, the changes to the topography and ground surface relief features will be in keeping with the existing and proposed physical developments adjacent to the Project site. Any impacts are considered less than significant.

No additional analysis will be required in the EIR.

b) Would the Project create cut or fill slopes greater than 2:1 or higher than 10 feet?

No Impact

No slopes greater than 2:1 are proposed, nor are any slopes greater than 10 feet in height proposed. No impacts will occur.

No additional analysis will be required in the EIR.

c) Would the Project result in grading that affects or negates subsurface sewage disposal systems?

No Impact

No subsurface sewage disposal systems are located on the Project site. Surrounding residences in proximity to the Project site utilize subsurface sewage disposal systems. No portion of the proposed Project will result in grading that affects or negates subsurface sewage disposal systems. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or requirements are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
17. Soils. a) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
b) Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	☐	☐	☒	☐
c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Source(s): Project Site Visit – April 10, 2018 by Matthew Fagan; *Map My County, (***Appendix A**); *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**).

Findings of Fact:

a) Would the Project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact

Tilled agricultural topsoil was exposed in all borings and test pits throughout the Project site to a depth of approximately 2'-3' below existing ground surface. The topsoil consists of light brown, silty fine sand that contains small quantities of organics from fertilization. The maximum depth of topsoil/fill encountered was 3'.

Site grading will create the potential for the proposed Project to result in soil erosion or the loss of topsoil. The County of Riverside Building and Safety Department has standard conditions, as they apply to manufactured slopes, and is included as **Standard Condition SC-GEO-3**, which require that the Project applicant plant and irrigate all manufactured slopes equal to or greater than 3 feet in vertical height with drought tolerant grass or ground cover; slopes 15 feet or greater in vertical height shall also be planted with drought tolerant shrubs or trees in accordance with the requirements of Ordinance 457.

In addition, wind erosion will be minimized through mandated soil stabilization measures by South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust), such as daily watering. This is included as **Standard Condition SC-AQ-3**.

Lastly, water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System (NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as **Standard Condition SC-HYD-1**.

These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

With the inclusion of **Standard Condition SC-GEO-3**, **Standard Condition SC-AQ-2**, and **Standard Condition SC-HYD-1**, any impacts from implementation of the proposed Project that could result in substantial soil erosion or the loss of topsoil, will remain less than significant.

No additional analysis will be required in the EIR.

b) Would the Project be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?

Less Than Significant Impact

Earth materials exposed in the exploratory borings have a very low expansion potential, however some medium expansion (EI>50) soils may be encountered at completion of grading. Consistent with Ordinance No. 457, each building pad be evaluated for its expansive potential and foundation design parameters will be incorporated.

California Building Code (CBC) requirements (as implemented through Ordinance No. 457) pertaining to new development and construction will minimize the potential for structural failure or loss of life during earthquakes by ensuring that structures are constructed pursuant to applicable seismic design criteria for the region. This is reflected in **Standard Condition SC-GEO-1**, below. CBC requirements are applicable to all development; therefore, they are not

considered mitigation for CEQA implementation purposes. In addition, **Standard Condition SC-GEO-2**, below, requires compliance with the *Geo Investigation*.

With adherence to **Standard Condition SC-GEO-1** and **Standard Condition SC-GEO-2**, should the Project be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property, any impacts would be reduced to less than significant level.

No additional analysis will be required in the EIR.

c) *Would the Project have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

No Impact

No portion of the proposed Project proposes the use of septic tanks or alternative waste water disposal systems. The Project will tie into existing sanitary sewer facilities located in Temescal Canyon Road. Therefore, whether or not the Project has soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water, is not relevant. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-GEO-1 The Project shall comply with the most recent version of Ordinance 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.

SC-GEO-2 Prior to the issuance of a grading and/or building permit, the Project applicant shall submit plans that demonstrate compliance with the geotechnical conclusions and recommendations contained in the *Geo Investigation* as it pertains to:

- General Earthwork and Grading;
- Earthwork Shrinkage and Subsidence;
- Removal Recommendations;
- Slopes;
- Seismic Design Parameters;
- Liquefaction and Secondary Earthquake Hazards;
- Foundations;
- Lateral Load Resistance;
- Interior lab on Grade;
- Miscellaneous Concrete Flatwork;
- Cement Type and Corrosion Potential;
- Temporary Slopes;
- Utility Trench Backfill;
- Preliminary Pavement Sections;
- Drainage and Moisture Proofing;

- Geotechnical Observations;
- Plan Review; and
- On-Site Stormwater Disposal.

SC-GEO-3 The Project applicant plant and irrigate all manufactured slopes equal to or greater than 3 feet in vertical height with drought tolerant grass or ground cover; slopes 15 feet or greater in vertical height shall also be planted with drought tolerant shrubs or trees in accordance with the requirements of Ordinance 457.

SC-AQ-1 SCAQMD Rule 403. Prior to grading permit issuance, all applicable measures shall be incorporated into Project plans and specifications as implementation of Rule 403, which include but are not limited to:

1. All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions;
2. 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 mid-morning, afternoon, and after work is done for the day; and
3. The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

SC-HYD-1 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
18. Erosion. a) Change deposition, siltation, or erosion that may modify the channel of a river or stream or the bed of a lake?	☒	☐	☐	☐
b) Result in any increase in water erosion either on or off site?	☒	☐	☐	☐

Source(s): Project Site Visit – April 10, 2018 by Matthew Fagan; *Map My County, (***Appendix A**); *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**).

Findings of Fact:

a) *Would the Project change deposition, siltation, or erosion that may modify the channel of a river or stream or the bed of a lake?*

Potentially Significant Impact

Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the Project results in substantial on- or off-site erosion or siltation. The potential exists for this to occur during both the construction and operational phases of the Project. The Project will be reviewed and conditioned by the Riverside County Flood Control and Water Conservation District (RCFC&WCD), County Building Department, and County Transportation Department, to eliminate any potential impacts from changes to deposition, siltation, or erosion through site design, adherence to the requirements of the National Pollutant Discharge Elimination System (NPDES), and the preparation of a Stormwater Pollution Prevention Plan (SWPPP), and a Water Quality Management Plan (WQMP).

Water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System (NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as **Standard Condition SC-HYD-1**, and **Standard Condition SC-HYD-2**, below. These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

To ensure a comprehensive discussion as to whether the Project would substantially alter the existing drainage pattern of the site or area, in a manner which would result in substantial erosion or siltation on- or off-site, this issue will be analyzed in the EIR.

b) *Would the Project result in any increase in water erosion either on or off site?*

Potentially Significant Impact

Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the Project results in any increase in water erosion either on or off site. The potential exists for this to occur during both the construction and operational phases of the Project. The Project will be reviewed and conditioned by the Riverside County Flood Control and Water Conservation District (RCFC&WCD), County Building Department, and County Transportation Department, to eliminate any potential impacts from changes to deposition, siltation, or erosion through site design, adherence to the requirements of the National Pollutant Discharge Elimination System (NPDES), and the preparation of a SWPPP, and a Water Quality Management Plan (WQMP).

Water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System (NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as **Standard Condition SC-HYD-1**, and **Standard Condition SC-HYD-2**, below. These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

To ensure a comprehensive discussion as to whether the Project would substantially alter the existing drainage pattern of the site or area, in a manner which would result in in any increase in water erosion either on or off site, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

SC-HYD-1 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

SC-HYD-2 The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS. Would the Project:				
19. Wind Erosion and Blowsand from Project either on- or off-site. a) Be impacted by or result in an increase in wind erosion and blowsand, either on- or off-site?	☐	☐	☒	☐

Source(s): *Map My County*, *(***Appendix A**); Ordinance No. 484 (An Ordinance of the County of Riverside for the Control of Blowing Sand); and Ordinance No. 457.

Findings of Fact:

a) Would the Project be impacted by or result in an increase in wind erosion and blowsand, either on- or off-site?

Less Than Significant Impact

The proposed Project site is located in an area of "Moderate Wind Eroding" rating. Implementation of the proposed Project may be impacted by or result in an increase in wind erosion and blowsand, either on or off site. All grading shall conform to the California Building Code, Ordinance 457, and all other relevant laws, rules, and regulations governing grading in Riverside County and prior to commencing any grading which includes 50 or more cubic yards, the applicant shall obtain a grading permit from the Building and Safety Department.

This is reflected in **Standard Condition SC-GEO-1**, below. This is a standard condition for the County of Riverside and is not considered not considered mitigation for CEQA implementation purposes.

The Project will be required to implement a Storm Water Pollution Prevention Plan (SWPPP) to address wind erosion and blow sand during the construction process. The SWPPP is required by the California Regional Water Quality Board Order 2009-0009-DWQ and the NPDES General Permit Number CAS000002. As part of the SWPPP, the Project will implement construction BMPs per the California Stormwater Quality Association (CASQA) Construction BMP Handbook that are used to control wind erosion and blow sand.

This is reflected in **Standard Condition SC-HYD-1**, below. This is a standard condition for the County of Riverside and is not considered not considered mitigation for CEQA implementation purposes.

With the inclusion of these standard conditions, any impacts from implementation of the proposed Project related to an increase in wind erosion and blowsand, either on- or off-site, will remain less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-GEO-1 The Project shall comply with the most recent version of Ordinance 457. In addition, all proposed buildings shall be subject to the seismic design criteria of the California Building Code (in effect prior to grading permit issuance, prior to building permit issuance, and prior to building final), which contains seismic safety provisions with the aim of preventing building collapse during a design earthquake, so that occupants would be able to evacuate after the earthquake.

SC-HYD-1 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS. Would the Project:				
20. Greenhouse Gas Emissions. 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?	☒	☐	☐	☐

Source(s): *Canterwood (Tentative Tract Map No. 37439) Greenhouse Gas Analysis*, prepared by Urban Crossroads, Inc., August 8, 2018 (*GHG Analysis*, **Appendix F**).

Findings of Fact:

a) *Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Potentially Significant Impact

GHG emissions for the Project were analyzed in the *GHG Analysis* to determine if the Project could have a cumulatively considerable impact related to greenhouse gas emissions.

To ensure a comprehensive discussion as to whether the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, this issue will be analyzed in the EIR.

b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact

The proposed Project could have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. The County of Riverside has an adopted Climate Action Plan (CAP); therefore, the Project and its GHG emissions will be compared to the goals of the County of Riverside CAP.

To ensure a comprehensive discussion as to whether the Project would conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
21. Hazards and Hazardous Materials. 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) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☐	☒	☐
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒

Source(s): *Phase I Environmental Site Assessment, for Tract 37439 and Channel Improvement APNs 466-120-019, 466-120-002, 466-120-022*, *466-310-026, 466-310-002,* prepared by RMA GeoScience, March 5, 2018 (*ESA*, **Appendix G1**); *Phase I Environmental Site Assessment Northwest Corner of APN 364-200-007,* prepared by RMA GeoScience, March 29, 2018 (*Lift Station Site ESA*, **Appendix G2**); Menifee Union School District web site; Perris Union High School District web site; GEOTRACKER website; and *The Department of Toxic Substances Control's Hazardous Waste and Substances Site List (Cortese List)* web site.

Findings of Fact:

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant Impact

The proposed Project could result in a significant hazard to the public if the project includes the routine transport, use, or disposal of hazardous materials or places housing near a facility which routinely transports, uses, or disposes of hazardous materials.

During construction, there would be a minor level of transport, use, and disposal of hazardous materials and wastes that are typical of construction projects. This would include fuels and lubricants for construction machinery, coating materials, etc. Routine construction control measures and best management practices would be employed for hazardous materials storage, application, waste disposal, accident prevention and clean-up, etc.

With regard to Project operation, widely used hazardous materials common at residential uses include cleaners, pesticides, and food waste. The remnants of these and other products are disposed of as household hazardous waste that are prohibited or discouraged from being disposed of at local landfills.

To ensure a comprehensive discussion as to whether the Project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, this issue will be analyzed in the EIR.

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?*

Potentially Significant Impact

During construction, there is a potential for accidental release of petroleum products from vehicles and equipment to pose a significant hazard to people and the environment. Impacts may occur during construction; however, with the incorporation of standard conditions, such as the SWPPP and WQMP, any impacts will remain less than significant. This is included as **Standard Condition SC-HYD-1**, and **Standard Condition SC-HYD-2**, below. These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

Hazardous materials anticipated during operations are anticipated to be those most commonly associated with residences and landscaping, which include cleaning products, petroleum products, etc. These types of hazardous materials are not potentially hazardous to large numbers of people, especially at the scale they would be stored and used with a residential use. Some use of potentially hazardous materials, such as herbicides, may be used for the maintenance of the drainage facilities. The use of such materials will be in accordance with state and federal regulations pertaining to their use.

To ensure a comprehensive discussion as to whether the Project would 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, this issue will be analyzed in the EIR.

c) *Would the Project impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?*

Less Than Significant Impact

The Project will be constructing residential uses, park facilities, drainage facilities, sewer lines and roadways. A limited potential exists to interfere with an emergency response or evacuation plan during construction. Control of access will ensure emergency access to the site and Project area during construction through the submittal and approval of a traffic control plan (TCP). The TCP is designed to mitigate any construction circulation impacts. The TCP is included below as **Standard Condition SC-TR-2**. **SC-TR-2** is not considered unique mitigation under CEQA.

Following construction, emergency access to the Project site and area will remain as was prior to the proposed Project. Therefore, implementation of the Project will not impair implementation of, or physically interfere, with an adopted emergency response plan or an emergency evacuation plan. Any impacts are considered less than significant.

No additional analysis will be required in the EIR.

d) 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

The following are the closest existing school to the Project site:

- Southshore Elementary School: located approximately 1.51 miles west of the Project site;
- Callie Kirkpatrick Elementary School: located approximately 2.15 miles west-northwest of the Project site;
- Freedom Crest Elementary School: located approximately 2.63 miles north-northwest of the Project site;
- Bell Mountain Middle School: located approximately 2.42 miles west of the Project site; and
- Mt. San Jacinto College: located approximately 2.55 miles west of the Project site.

There are no existing schools located within one-quarter mile of the Project site. The Project site is located within the Southshore Elementary School boundary and the Bell Mountain Middle School boundary. No elementary or middle school is proposed within one-quarter mile of the Project site.

The Project is located within the Heritage High School boundary (26001 Briggs Road), which is located approximately 3.6 miles due north of the Project site.

Perris Unified High School District (PUHSD) has identified a site for its 4th high school (High School #4). This school is currently proposed on 52-acres, located at the northwest corner of Wickerd and Leon Road, approximately 0.56 miles south-southwest of the Project site.

Based on this information, the Project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Lastly, as discussed in Sections 21.a, and 21.b, above, the Project is not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste beyond that normally associated with a primarily residential project (with park and open space components). With adherence to **Standard Condition SC-HYD-1** and **Standard Condition SC-HYD-2**, impacts will remain less than significant.

No additional analysis will be required in the EIR.

e) 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

The California State Waterboards GEOTRACKER site provides information regarding Leaking Underground Storage Tanks, Other Cleanup Sites, Land Disposal Sites, Military Sites, Waste Discharge Requirement (WDR) Sites, Permitted Underground Storage Tank (UST) Facilities, Monitoring Wells, Department of Toxic Substances Control (DTSC) Cleanup Sites and DTSC Hazardous Waste Permit Sites.

According to the GEOTRACKER site, there are no Leaking Underground Storage Tanks, Other Cleanup Sites, Land Disposal Sites, Military Sites, WDR Sites, Permitted UST Facilities, Monitoring Wells, DTSC Cleanup Sites and DTSC Hazardous Waste Permit Sites on the proposed Project site, or within 1 mile of the proposed Project site. Detailed information is shown on **Figure 22-1, *Geotracker Site***.

The DTSC's Hazardous Waste and Substances Site List (Cortese List) does not show any Hazardous Waste and Substances Sites currently located within a 1-mile radius of the proposed Project site. This information was verified at the web-link cited in the sources, and shown on **Figure 22-2, *Envirostor Site***.

Based upon the available data, there is no evidence to support that hazardous wastes or contamination would be present on the site. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

Standard conditions requiring a Stormwater Pollution Prevention Plan (SWPPP), a Water Quality Management Plan (WQMP), from Hydrology and Water Quality (Section V.9), and a Traffic Control Plan (TCP), from Transportation/Traffic (Section V.16), as they also pertain to hazards and hazardous materials, are provide below and will be carried over to the DEIR from this IS.

SC-HYD-1 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

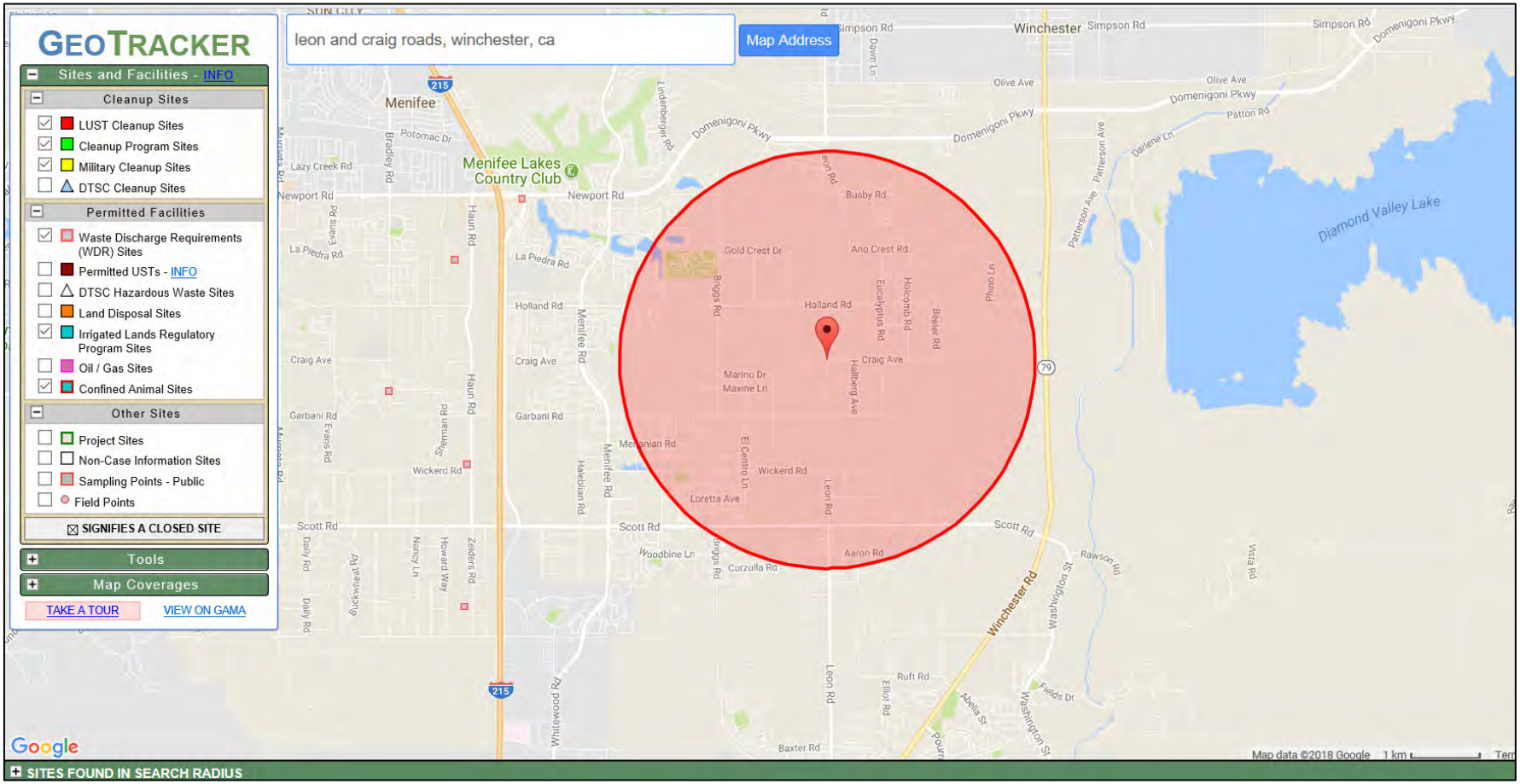
SC-HYD-2 The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

SC-TR-2 The Applicant is required to develop and implement a City-approved Traffic Control Plan (TCP) addressing potential construction-related traffic detours and disruptions. In general, the TCP will ensure that to the extent practical, construction traffic would access the Project site during off-peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses.

Mitigation: No mitigation measures are required.

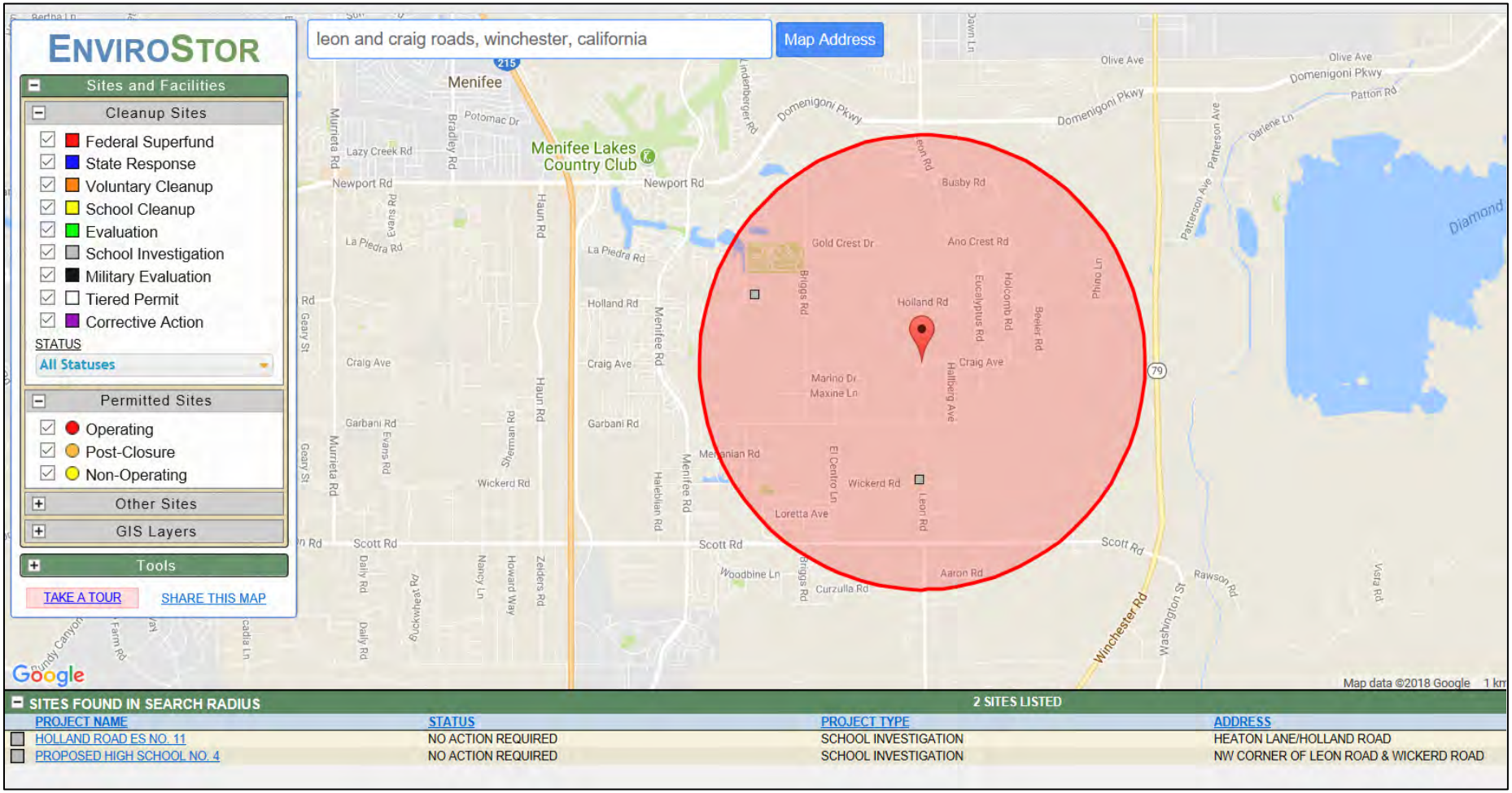
Monitoring: No mitigation monitoring is required.

Figure 22-1
GEOTRACKER Site



Source: https://geotracker.waterboards.ca.gov/ accessed 2017

Figure 22-2
ENVIROSTOR Site



PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS
HOLLAND ROAD ES NO. 11	NO ACTION REQUIRED	SCHOOL INVESTIGATION	HEATON LANE/HOLLAND ROAD
PROPOSED HIGH SCHOOL NO. 4	NO ACTION REQUIRED	SCHOOL INVESTIGATION	NW CORNER OF LEON ROAD & WICKERD ROAD

Source: https://www.envirostor.dtsc.ca.gov/public/ accessed 2017

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
22. Airports. a) Result in an inconsistency with an Airport Master Plan?	☐	☐	☐	☒
b) Require review by the Airport Land Use Commission?	☐	☐	☐	☒
c) 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 for people residing or working in the Project area?	☐	☐	☐	☒
d) For a project within the vicinity of a private airstrip, or heliport, would the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☐	☒

Source(s): *General Plan* Figure S-20, *Airport Locations*, (p. S-73); *Map My County, (***Appendix A**); *HVWAP* Figure 5, *Harvest Valley/Winchester Area Plan Airport Influence Area*; Figure 6, *Harvest Valley/Winchester Area Plan MJARB Airport Influence Area*; *SC/MVAP* Figure 4, *Sun City/Menifee Area Plan Overlays and Policy Areas*; *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*; City-Data.com; and **Figure 2, *Aerial Photo with Project Components***.

Findings of Fact:

a) Would the Project result in an inconsistency with an Airport Master Plan?

No Impact

The Residential Project site components are not located in an area which is governed by an airport master plan. The Off-site Project components are located within Zone E of the March Air Reserve Base / Inland Port Airport Influence Area.

According to the *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*, November 2014, Zone E has a low noise impact; it is beyond the 55-CNEL contour. Occasional overflights may be intrusive to some outdoor activities. Zone E has a low risk level as it is within the outer or occasionally used portions of flight corridors. Zone E has no limit on the number residential dwelling units permitted on a site, no restriction on the number of people per acre allowed on a site, and no open land requirement.

This criterion is not applicable to the Project. No impacts will occur.

No additional analysis will be required in the EIR.

b) Would the Project require review by the Airport Land Use Commission?

No Impact

Please reference the discussion in Section 23.a, above. The Residential Project site components are not located in an area which is governed by an airport land use plan; therefore, review by an airport land use commission is not required. This criterion is not applicable to the Project. No impacts will occur.

No additional analysis will be required in the EIR.

c) *Would the Project result in a safety hazard for people residing or working in the Project area 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?*

No Impact

The Residential Project site components are not located in an area which is governed by an airport master plan. The Off-site Project components are located within Zone E of the March Air Reserve Base / Inland Port Airport Influence Area. The Project is not located within two miles of a public airport or public use airport.

Therefore, this criterion is not applicable to the Project. No impacts will occur.

No additional analysis will be required in the EIR.

d) *For a project within the vicinity of a private airstrip, or heliport, would the Project result in a safety hazard for people residing or working in the Project area?*

No Impact

The closest private airstrip, Pines Private Airfield, is no longer in operation. The next closest private airstrip is the Billy Joe Airport - 37CA is located approximately 13 miles to the southwest of the Project site and the closest heliport is located approximately 14 miles to the northeast of the Project site. These distances are out of the immediate vicinity of the Project Site.

Therefore, implementation of the proposed Project would not result in a safety hazard for people residing or working in the proposed Project area. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

There are no applicable standard conditions or requirements.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
23. Hazardous Fire Area. a) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Source(s): *Map My County, (***Appendix A**); *General Plan*; Ordinance No. 787 (An Ordinance of the County of Riverside Adopting the 2016 California Fire Code as Amended); and Ordinance No. 659 (An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program).

Findings of Fact:

a) Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact

The proposed Project site is not located within either a high fire area, or within a State Fire Responsibility Area.

The proposed Project will be reviewed, and conditions of approval will be placed on the proposed Project to address any potential impacts to Fire Resources, consistent with the Fire Hazards section of the Safety Element of the General Plan, and Ordinance No. 787.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. Prior to final map recordation, prior to grading permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787. Adherence to Ordinance No. 787 (**Standard Condition SC-HAZ-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Another standard condition assessed on the proposed Project to reduce impacts from the proposed Project to fire services is Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. Development Impact Fees (DIF) for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate DIF fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. **Standard Condition SC-PS-1** relates to Fire Services which are discussed within Section 36, Fire Services, of this IS.

With the inclusion of these standard conditions, and payment of, any impacts from implementation of the proposed Project would not expose people or structures to a significant

risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Less than significant impacts are anticipated.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-HAZ-1 Prior to final map recordation, prior to grading permit issuance, prior to building permit issuance, and prior to building final inspection the Project will need to demonstrate compliance with Ordinance No. 787.

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY. Would the Project:				
24. Water Quality Impacts. a) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☒	☐	☐	☐
b) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
c) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐
d) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐
e) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☒	☐	☐	☐
f) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☒	☐	☐	☐
g) Otherwise substantially degrade water quality?	☒	☐	☐	☐
h) Include new or retrofitted stormwater Treatment Control Best Management Practices (BMPs) (e.g. water quality treatment basins, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors and odors)?	☒	☐	☐	☐

Source(s): *Project Specific Water Quality Management Plan Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018 (*WQMP* **Appendix H1**); *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018 (*Hydrology Study* **Appendix H2**); *Geotechnical Investigation and Infiltration Testing Tentative Tract Map 37439,* prepared by RMA GeoScience, March 20, 2018 (*Geo Investigation* **Appendix E**); and *Map My County, (***Appendix A**).

Findings of Fact:

a) Would the Project substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

Potentially Significant Impact

Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the Project would substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. The potential exists for this to occur during both the construction and operational phases of the Project. The Project will be reviewed and conditioned by the Riverside County Flood Control and Water Conservation District (RCFC&WCD), County Building Department, and County Transportation Department, to eliminate any potential impacts from changes to deposition, siltation, or erosion through site design, adherence to the requirements of the National Pollutant Discharge Elimination System (NPDES), and the preparation of a Stormwater Pollution Prevention Plan (SWPPP), and a Water Quality Management Plan (WQMP).

Water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System (NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as **Standard Condition SC-HYD-1**, and **Standard Condition SC-HYD-2**, below. These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

To ensure a comprehensive discussion as to whether the Project would substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site, this issue will be analyzed in the EIR.

b) Would the Project violate any water quality standards or waste discharge requirements?

Potentially Significant Impact

A project normally would have an impact on surface water quality if discharges associated with the project would create pollution, contamination, or nuisance as defined in Water Code Section 13050, or that cause regulatory standards to be violated as defined in the applicable National Pollutant Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for a receiving water body. For the purpose of this specific issue, a significant impact could occur if the Project would discharge water that does not meet the quality standards of the agencies which regulate surface water quality and water discharge into stormwater drainage systems. Significant impacts could also occur if the Project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include preparation of a Water Quality Management Plan (WQMP) to reduce potential post-construction water quality impacts.

<u>Construction Impacts</u>

Three general sources of potential short-term, construction-related stormwater pollution associated with the proposed Project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth-moving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment.

<u>Operational Impacts</u>

Proposed construction of the residential buildings will increase impervious areas by replacing the vacant property with associated paving and rooftops. Landscaping is proposed as part of Project design in the form of landscaped planters containing trees, shrubs, ground covers, and

vines. The Project proponent has submitted a Water Quality Management Plan (*WQMP*) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements. The WQMP is included as **Standard Condition SC-HYD-2**, below. This standard condition is applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

All wastewater associated with the Project's interior plumbing systems will be discharged into the local sewer system for treatment at the regional wastewater treatment plant.

To ensure a comprehensive discussion as to whether the Project would violate any water quality standards or waste discharge requirements, this issue will be analyzed in the EIR.

c) *Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Potentially Significant Impact

If the Project removes an existing groundwater recharge area or substantially reduces runoff that results in groundwater recharge such that existing wells will no longer be able to operate, a potentially significant impact could occur.

The *Geo Evaluation* noted that no groundwater was encountered in any of the test pits that were excavated at the site to a maximum depth of 9 feet below existing grade or the borings that were excavated to 21 feet below existing grade. No groundwater was encountered by previous consultants in borings excavated to 50 feet below existing grade.

Project-related grading will not reach these depths and no disturbance of groundwater is anticipated. The proposed single-family residential building footprints, roadways and other hardscape will increase on-site impervious surface coverage thereby reducing the total amount of infiltration on-site.

To ensure a comprehensive discussion as to whether the Project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted), this issue will be analyzed in the EIR.

d) *Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Potentially Significant Impact

Consistent with the discussion in Thresholds 24.a, and 24.b, above, potentially significant impacts could occur if development of the project results in runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

To ensure a comprehensive discussion as to whether the Project would 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, this issue will be analyzed in the EIR.

e) Would the Project place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Potentially Significant Impact

According to **Figure 24-1, *FEMA FIRM Map No. 06065C2090G***, the proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard. In order to ensure a comprehensive discussion as to whether the Project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, this issue will be analyzed in the EIR.

f) Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Potentially Significant Impact

According to **Figure 24-1, *FEMA FIRM Map No. 06065C2090G***, the proposed Project site is located in Zone "X," which is identified as an area of minimal flood hazard. In order to ensure a comprehensive discussion as to whether the Project would place within a 100-year flood hazard area structures which would impede or redirect flood flows, this issue will be analyzed in the EIR.

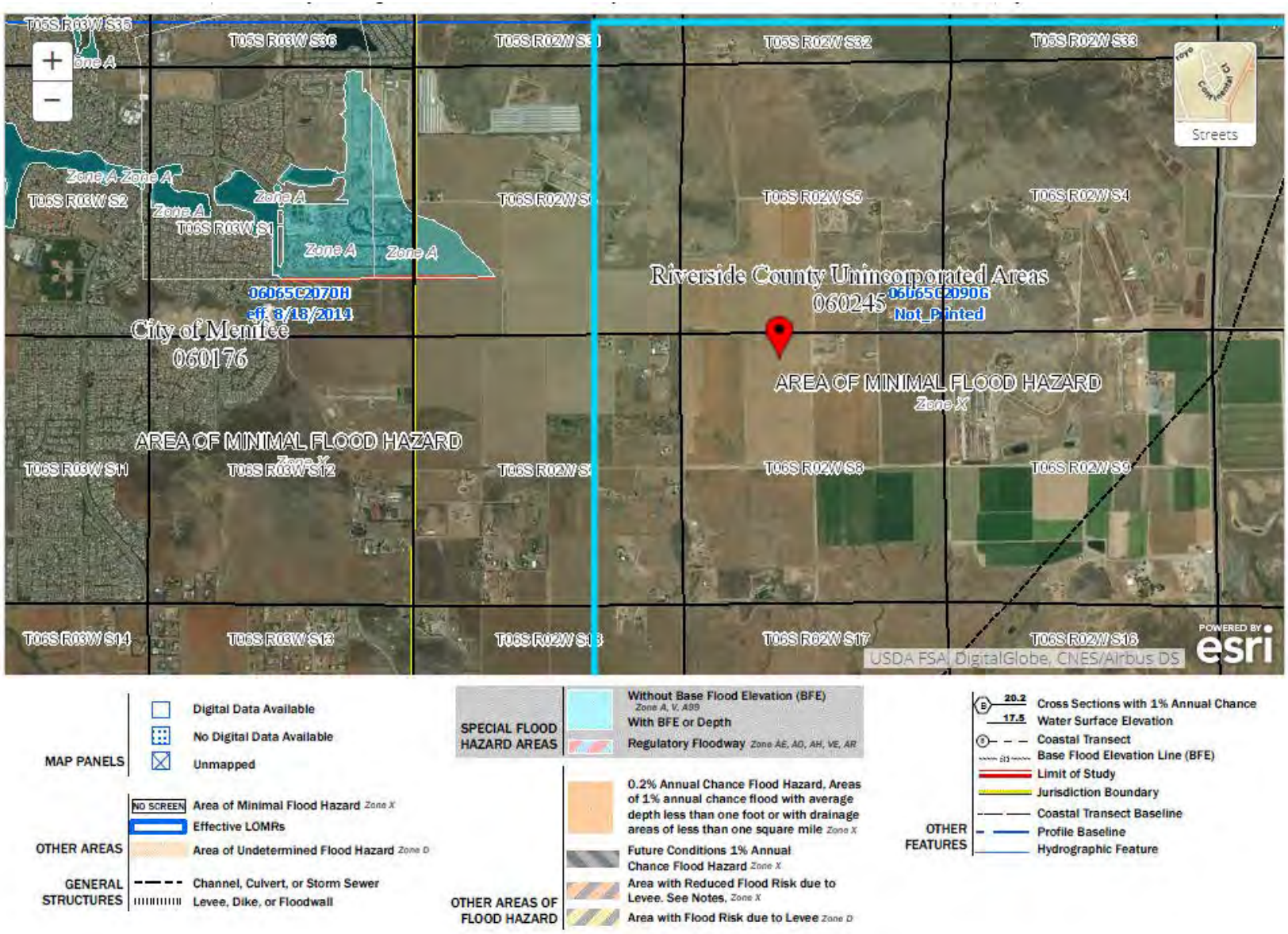
g) Would the Project otherwise substantially degrade water quality?

Potentially Significant Impact

Consistent with the discussion in Thresholds 24.a, 24.b, and 24.d, above, potentially significant impacts could occur if development of the Project would otherwise substantially degrade water quality.

To ensure a comprehensive discussion as to whether the Project would otherwise substantially degrade water quality, this issue will be analyzed in the EIR.

Figure 24-1
FEMA FIRM Map No. 06065C2090G



Source: http://msc.fema.gov/portal accessed 2018

h) Would the Project include new or retrofitted stormwater Treatment Control Best Management Practices (BMPs) (e.g. water quality treatment basins, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors or odors)?

Potentially Significant Impact

There are no Project-related stormwater treatment facilities within the Project site under existing conditions. The proposed Project will install new stormwater treatment facilities, and structural and occupancy measures required to meet County requirements. To ensure that onsite surface water features are managed in a manner that prevents vector breeding and vector nuisances, BMPs as defined in the *WQMP* shall be installed. The WQMP is included as **Standard Condition SC-HYD-2**, below. This standard condition is applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

Conditions of approval shall also be provided to ensure these stormwater treatment facilities will be installed either during grading of the Project site or concurrent with these grading activities. A potential for odors does exist if basins are not maintained and organic matter not removed periodically.

To ensure a comprehensive discussion as to whether the Project would include new or retrofitted stormwater Treatment Control Best Management Practices (BMPs) (e.g. water quality treatment basins, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors or odors), this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

SC-HYD-1 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

SC-HYD-2 The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY. Would the Project:				
25. Floodplains. Degree of Suitability in 100-Year Floodplains. As indicated below, the appropriate Degree of Suitability has been checked. NA – Not Applicable ☐ U – Generally Unsuitable ☐ R – Restricted ☐				
a) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☒	☐	☐	☐
b) Changes in absorption rates or the rate and amount of surface runoff?	☒	☐	☐	☐
c) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Dam Inundation Area)?	☒	☐	☐	☐
d) Changes in the amount of surface water in any water body?	☒	☐	☐	☐

Source(s): *General Plan* Figure S-9, *Special Flood Hazard Areas*, (p. S-37), *General Plan* Figure S-10, *Dam Failure Inundation Zone*, (p. S-39); *HVWAP* Figure 11, *HVWAP Special Flood Hazard Areas*; *SCMVAP* Figure 9, *SCMVAP Special Flood Hazard Areas*; *Map My County, (***Appendix A**); *Project Specific Water Quality Management Plan Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018 (*WQMP* **Appendix H1**); and *Preliminary Hydrology and Hydraulic Study for Tentative Tract Map 37439,* prepared by JLC Engineering and Consulting, Inc., June 19, 2018 (*Hydrology Study* **Appendix H2**).

Findings of Fact:

a) 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 substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Potentially Significant Impact

Potentially significant impacts to the existing drainage pattern of the site or area could occur if development of the Project would alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The potential exists for this to occur during both the construction and operational phases of the Project. The Project will be reviewed and conditioned by the Riverside County Flood Control and Water Conservation District (RCFC&WCD), County Building Department, and County Transportation Department, to eliminate any potential impacts from changes to deposition, siltation, or erosion through site design, adherence to the requirements of the National Pollutant Discharge Elimination System (NPDES), and the preparation of a Stormwater Pollution Prevention Plan (SWPPP), and a Water Quality Management Plan (WQMP).

Water erosion will be prevented through the County's standard, mandated, erosion control practices required pursuant to the CBC, and the National Pollution Discharge Elimination System (NPDES), such as silt fencing, fiber rolls, or sandbags. This is included as **Standard Condition SC-HYD-1**, and **Standard Condition SC-HYD-2**, below. These standard conditions are applicable to all development; therefore, they are not considered mitigation for CEQA implementation purposes.

To ensure a comprehensive discussion as to whether the Project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, this issue will be analyzed in the EIR.

b) Would the Project result in changes in absorption rates or the rate and amount of surface runoff?

Potentially Significant Impact

Consistent with the discussion in Threshold, 25.b, above, potentially significant impacts could occur if development of the Project would result in changes in absorption rates or the rate and amount of surface runoff.

To ensure a comprehensive discussion as to whether the Project would result in changes in absorption rates or the rate and amount of surface runoff, this issue will be analyzed in the EIR.

c) Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Dam Inundation Area)?

Potentially Significant Impact

The Project site is located in a dam inundation area for the Diamond Valley Lake. In order to ensure a comprehensive discussion as to whether the Project would expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Dam Inundation Area), this issue will be analyzed in the EIR.

d) Would the Project result in changes in the amount of surface water in any water body?

Potentially Significant Impact

The Project site will create drainage conveyance devises that will ultimately end up at Canyon Lake. In order to ensure a comprehensive discussion as to whether the Project result in changes in the amount of surface water in any water body, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

SC-HYD-1 The Project shall control stormwater runoff so as to prevent any deterioration of water quality that will impair subsequent or competing uses of the water. The County will review and approve Best Management Practices (BMPs) contained in the Project applicants submitted Stormwater Pollution Prevention Plan (SWPPP) to be implemented to reduce the discharge of pollutants during construction. The Project applicant's SWPPP shall identify erosion control BMPs to minimize

pollutant discharges during construction activities. These identified BMPs will include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection.

SC-HYD-2 The Project proponent shall submit a Water Quality Management Plan (WQMP) for review and approval. The WQMP identifies post-construction BMPs in addressing increases in impervious surfaces, methods to decrease incremental increases in off-site stormwater flows, and methods for decreasing pollutant loading in off-site discharges as required by the applicable NPDES requirements.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE/PLANNING. Would the Project:				
26. Land Use. a) Result in a substantial alteration of the present or planned land use of an area?	☒	☐	☐	☐
b) Affect land use within a city sphere of influence and/or within adjacent city or county boundaries?	☐	☐	☐	☒

Source(s): *General Plan*; *HVWAP*; and *SCMVAP*.

Findings of Fact:

a) Would the Project result in a substantial alteration of the present or planned land use of an area?

Potentially Significant Impact

The following land use designations apply to the Project:

- Residential Project Site Components:
  - Existing – Medium Density Residential (MDR).
  - Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

- Off-Site Project Components:
  - Existing – Estate Density Residential (EDR).
  - Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

The following are the current adjacent and surrounding Land Use Designation(s):

- Residential Project Site Components (all Community Development):
  - North: Medium Density Residential (MDR).
  - South: Medium Density Residential (MDR).
  - East: Medium Density Residential (MDR).
  - West: Estate Density Residential (EDR).

- Off-Site Project Components (Community Development and Rural Community):
  - North: Estate Density Residential (CD: EDR).
  - South: Estate Density Residential (RC: EDR).
  - East: Medium Density Residential (CD MDR).
  - West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads.

The site of the proposed offsite trapezoidal earthen drainage channel lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that

is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Briggs Road at the west. The proposed trapezoidal earthen drainage channel bounded at east by Eucalyptus Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Leon Road. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the channel ROW, Briggs Road, and Tres Lagos Road ROWs. All three of these have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

As shown above, existing land uses are agricultural, vacant, or large lot single-family residential, and planned surrounding land uses are residential, with varying degrees of density potential.

In order to ensure a comprehensive discussion as to whether the Project would result in a substantial alteration of the present or planned land use of an area, this issue will be analyzed in the EIR.

b) Would the Project affect land use within a city sphere of influence and/or within adjacent city or county boundaries?

No Impact

The Project site is not located within a City Sphere of Influence. The closest city is the City of Menifee and the City's sphere of influence is conterminous with the City's boundary. No component of the Project would affect land use within the City of Menifee (adjacent city) boundary.

Based on this information, implementation of the Project would not affect land use within a city sphere of influence and/or within adjacent city or county boundaries. No impact will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE/PLANNING. Would the Project:				
27. Planning. a) Be consistent with the site's existing or proposed zoning?	☒	☐	☐	☐
b) Be compatible with existing surrounding zoning?	☒	☐	☐	☐
c) Be compatible with existing and planned surrounding land uses?	☒	☐	☐	☐
d) Be consistent with the land use designations and policies of the Comprehensive General Plan (including those of any applicable Specific Plan)?	☒	☐	☐	☐
e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☒	☐	☐	☐

Source(s): *Map My County* (**Appendix A**); **Figure 4*, CZ 1800007***; *General Plan*; and Ordinance No. 348.

Findings of Fact:

a) Would the Project be consistent with the site's existing or proposed zoning?

Potentially Significant Impact

The following is the site's existing and proposed zoning (if applicable):

- Existing Zoning:
  - Residential Project Site Components: One-Family Dwellings (R-1).
  - Off-Site Project Components: Light Agriculture, 5-acre minimum lot size (A-1-5).
- Proposed Zoning:
  - Residential Project Site Components: Planned Residential (R-4).
  - Off-Site Project Components: None.

As shown above, the current zoning classification on the residential Project site is R-1 (One-Family Dwellings). CZ 1800007 proposes to change the zoning classification on the entire residential Project site of 158.18 gross acres from R-1 (to R-4 (Planned Residential). No other changes are proposed. Reference **Figure 4*, CZ 1800007***.

In order to ensure a comprehensive discussion as to whether the Project would be consistent with the site's existing or proposed zoning, this issue will be analyzed in the EIR.

b) Would the Project be compatible with existing surrounding zoning?

Potentially Significant Impact

The following is the adjacent and surrounding zoning:

- Residential Project Site Components:
  - North: Specific Plan (S-P) – (Specific Plan 293 - Winchester Hills).
  - South: Rural Residential (R-R).

- East: Rural Residential (R-R) and One-Family Dwellings (R-1).
- West: Rural Residential (R-R) and Light Agriculture, 5-acre minimum lot size (A-1-5).

- Off-Site Project Components:
  - North:
    - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Rural Residential (R-R).
  - South:
    - County of Riverside: Rural Residential (R-R), and Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Light Agriculture, 2½-acre minimum lot size (A-1-2½).
  - East:
    - County of Riverside: Rural Residential (R-R), One-Family Dwellings (R-1), and Light Agriculture, 2½-acre minimum lot size (A-1-2½).
    - City of Menifee: N/A.
  - West:
    - County of Riverside: Light Agriculture, 5-acre minimum lot size (A-1-5).
    - City of Menifee: Menifee East Specific Plan (SP).

As shown above, there are residential and agricultural zoning designations on the adjacent and surrounding properties.

In order to ensure a comprehensive discussion as to whether the Project would be compatible with existing surrounding zoning, this issue will be analyzed in the EIR.

c) Would the Project be compatible with existing and planned surrounding land uses?

Potentially Significant Impact

The following are the current adjacent and surrounding Land Use Designation(s):

- Residential Project Site Components (all Community Development):
  - North: Medium Density Residential (MDR).
  - South: Medium Density Residential (MDR).
  - East: Medium Density Residential (MDR).
  - West: Estate Density Residential (EDR).

- Off-Site Project Components (Community Development and Rural Community):
  - North: Estate Density Residential (CD: EDR).
  - South: Estate Density Residential (RC: EDR).
  - East: Medium Density Residential (CD MDR).
  - West: 2.1-5 du/ac Residential (2.1-5R) – City of Menifee.

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads.

The site of the proposed trapezoidal earthen drainage channel lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being

used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Briggs Road at the west. The proposed trapezoidal earthen drainage channel bounded at east by Eucalyptus Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Leon Road. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the channel ROW, Briggs Road, and Tres Lagos Road ROWs. All three of these have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

As shown above, existing land uses are agricultural, vacant, or large lot single-family residential, and planned surrounding land uses are residential, with varying degrees of density potential.

In order to ensure a comprehensive discussion as to whether the Project would be compatible with existing and planned surrounding land uses, this issue will be analyzed in the EIR.

d) Would the Project be consistent with the land use designations and policies of the General Plan (including those of any applicable Specific Plan)?

Potentially Significant Impact

The following land use designations apply to the Project:

- Residential Project Site Components:
  - Existing – Medium Density Residential (MDR).
  - Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

- Off-Site Project Components:
  - Existing – Estate Density Residential (EDR).
  - Proposed – N/A (No change to the General Plan Land Use Designation is proposed).

The Project is located within both the *HVWAP* and the *SCMVAP*. In addition, it is also located within the Highway 79 Policy Area and Estate Density Residential & Rural Residential Policy Area. Lastly, the Project will be subject to the Countywide Design Standards & Guidelines (Guidelines). There is no applicable specific plan.

In order to ensure a comprehensive discussion as to whether the Project would be consistent with the land use designations and policies of the General Plan (including those of any applicable Specific Plan), this issue will be analyzed in the EIR.

e) Would the Project disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?

Potentially Significant Impact

Current land use is vacant; adjacent land use is vacant to the north, vacant and agricultural to the east, vacant to the south, and vacant and residential to the west. It lies one mile east of the

eastern boundary of the City of Menifee, which runs along Briggs Road in this area. The surrounding area is rural in character and dominated by large expanses of agricultural fields with scattered farmsteads.

The site of the proposed trapezoidal earthen drainage channel lies immediately to the west of the proposed residential development and is also composed of flat agricultural land that is being used primarily growing crops but contains several farmhouses and a dairy farm in the eastern portion.

The proposed trapezoidal earthen drainage channel spans a distance of 1.5 miles stretching from Eucalyptus Road at the east to Briggs Road at the west. The proposed trapezoidal earthen drainage channel bounded at east by Eucalyptus Road, at the north by Holland Road, at the south by Craig Avenue and at the west by Leon Road. The proposed trapezoidal earthen drainage channel area is relatively flat, tilled agricultural land with a total relief of approximately 9 feet, sloping gently to the southwest.

The off-site sewer will be installed within the channel ROW, Briggs Road, and Tres Lagos Road ROWs. All three of these have generally flat topographies, similar to the adjacent properties. Only Briggs Road is paved. With the exception of homes located southwesterly of the intersection of Leon and Holland Roads, and the Wilderness Lakes RV Resort, located southwesterly of the intersection of Briggs Road and Tres Lagos Road, adjacent properties are either vacant or have agricultural uses.

In order to ensure a comprehensive discussion as to whether the Project would disrupt or divide the physical arrangement of an established community (agricultural, vacant, or large lot single-family residential), this issue will be analyzed in the EIR.

There are no components of the proposed Project that would obstruct access to the community or divide the physical arrangement of the community. Additionally, there is no low-income or minority community on the Project site; therefore, this is not applicable. No additional analysis will be required for these issues in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MINERAL RESOURCES. Would the Project:				
28. Mineral Resources. a) Result in the loss of availability of a known mineral resource in an area classified or designated by the State that would be of value to the region or the residents of the State?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒
c) Be an incompatible land use located adjacent to a State classified or designated area or existing surface mine?	☐	☐	☐	☒
d) Expose people or property to hazards from proposed, existing or abandoned quarries or mines?	☐	☐	☐	☒

Source(s): *General Plan*, *Multipurpose Open Space Element*, Figure OS-6, *Mineral Resources Area* (p. OS-41); *Map My County, (***Appendix A**); mindat.org website; and Project Site Visit – April 10, 2018 by Matthew Fagan.

Findings of Fact:

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?

No Impact

The State Mining and Geology Board (SMGB) has established Mineral Resources Zones (MRZ) using the following classifications:

- MRZ-1: Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
- MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit is undetermined.
- MRZ-4: Areas where there is not enough information available to determine the presence or absence of mineral deposits.

As shown on *General Plan Multipurpose Open Space Element*, Figure OS-6, "Mineral Resources Area," the Project site is designated MRZ-3a (areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposits is undetermined). The Project site has not been used for mining. The Project will include residential uses and drainage facilities in an area where a few large lot residences currently exist, and will be the predominant future uses in the area. Therefore, the Project is not expected to result in the loss of availability of a known mineral resource in an area classified or designated by the State that would be of value to the region or the residents of the State. No impacts will occur.

No additional analysis will be required in the EIR.

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?*

No Impact

As stated in Section 29.a, above, the Project site is designated MRZ-3a (areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposits is undetermined). The Project site has not been used for mining. The Project will include residential uses and drainage facilities in an area where a few large lot residences currently exist, and will be the predominant future uses in the area. Therefore, implementation of the proposed Project will not 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. No impacts will occur.

No additional analysis will be required in the EIR.

c) *Would the Project be an incompatible land use located adjacent to a State classified or designated area or existing surface mine?*

No Impact

Based on a site visit, it was observed that the Project site is not adjacent to a State classified or designated area or existing surface mines. Therefore, impementation of the proposed Project will not result in an incompatible land use located adjacent to a State classified or designated area or existing surface mines. No impacts will occur.

No additional analysis will be required in the EIR.

d) *Would the Project expose people or property to hazards from proposed, existing or abandoned quarries or mines?*

No Impact

Based on a site visit, it was observed that the Project is not located on, or adjacent to, an existing or abandoned quarry or mine.

The closest identified mines (historic) in proximity to the Project site are:

- Ensley-Spaulding Deposit (Latitude 33.6433334351, Longitude -117.084724426), located approximately 2.06 miles south-southeasterly of the Project site.
- Riverside County Gravel pit [12] Latitude 33.6277770996, Longitude -117.1222229 approximately 2.4 miles southerly of the Project site.
- Leon Mine Latitude 33.65222, Longitude -117.13528 located approximately 1.17 miles south-southwesterly of the Project site.

Therefore, implementation of the proposed Project will not expose people or property to hazards from proposed, existing or abandoned quarries or mines. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or requirements are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE. Would the Project result in:				
Definitions for Noise Acceptability Ratings Where indicated below, the appropriate Noise Acceptability Rating(s) has been checked. NA – Not Applicable A – Generally Acceptable B – Conditionally Acceptable C – Generally Unacceptable D – Land Use Discouraged				
29. Airport Noise. a) 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 expose people residing or working in the Project area to excessive noise levels? NA ☒ A ☐ B ☐ C ☐ D ☐	☐	☐	☐	☒
b) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels? NA ☒ A ☐ B ☐ C ☐ D ☐	☐	☐	☐	☒

Source(s): *HVWAP* Figure 5, *Harvest Valley/Winchester Area Plan Airport Influence Area*; Figure 6, *Harvest Valley/Winchester Area Plan MJARB Airport Influence Area*; *SC/MVAP* Figure 4, *Sun City/Menifee Area Plan Overlays and Policy Areas*; *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*; City-Data.com; and **Figure 2, *Aerial Photo with Project Components***.

Findings of Fact:

a) 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 expose people residing or working in the Project area to excessive noise levels?

No Impact

The Residential Project site components are not located in an area which is governed by an airport master plan. The Off-site Project components are located within Zone E of the March Air Reserve Base / Inland Port Airport Influence Area.

According to the *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*, November 2014, Zone E has a low noise impact; it is beyond the 55-CNEL contour. Occasional overflights may be intrusive to some outdoor activities. Zone E has a low risk level as it is within the outer or occasionally used portions of flight corridors. Zone E has no limit on the number residential dwelling units permitted on a site, no restriction on the number of people per acre allowed on a site, and no open land requirement.

Based on this distance, the Project will not be subjected to noise from airplanes. No impacts will occur.

No additional analysis will be required in the EIR.

b) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?

No Impact

The closest private airstrip, Pines Private Airfield, is no longer in operation. The next closest private airstrip is the Billy Joe Airport - 37CA is located approximately 13 miles to the southwest of the Project site and the closest heliport is located approximately 14 miles to the northeast of the Project site. These distances are out of the immediate vicinity of the Project Site.

Therefore, implementation of the proposed Project would not expose people residing or working in the Project area to excessive noise levels from airplanes in association with a private airstrip or heliport. No impact will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

There are no applicable standard conditions or requirements.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE. Would the Project result in:				
30. Railroad Noise. NA☒ A☐ B☐ C☐ D☐	☐	☐	☐	☒

Source(s): *HVWAP*, *HVWAP,* Figure 8, *Harvest Valley/Winchester Area Plan Circulation*; and *SC/MVAP,* Figure 6, *Sun City/Menifee Area Plan Circulation*.

Findings of Fact:

No Impact

According to the *HVWAP* (p. 42):

> "The Burlington Northern/Santa Fe rail line physically bisects the planning area and divides it into northern and southern halves. The railroad is currently being used for freight and cargo hauling but has the potential to be used for passenger service. This route would connect the City of Hemet with the March Joint Air Reserve Base and the City of Riverside. Expanded regional access available from a new transit opportunity would reinforce the development of new homes, business, and recreational opportunities here."

HVWAP Figure 8 shows a railroad line approximately 2.75 miles northerly of the nearest portion of the Project site. Based on the distance from this line, no adverse railroad noise impacts will occur at the Project site. No railway lines are located within the *SC/MVAP*. No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE. Would the Project result in:				
31. Highway Noise. NA☐ A☐ B☒ C☐ D☐	☒	☐	☐	☐

Source(s): *Canterwood (Tentative Tract Map No. 37439) Noise Impact Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018 (*NIA*, **Appendix I**).

Findings of Fact:

Potentially Significant Impact

The Project will result in an incremental addition to highway noise in the Project vicinity, as the area adjacent to the Project site is agricultural in nature. The Project will add vehicle trips to Leon Road, Eucalyptus Road, Briggs Road, Holland Road, Scott Road and I-215.

The County of Riverside Department of Public Health has published requirements for determining and mitigating traffic noise impacts to residential structures (November 23, 2009). Required noise standards are presented below:

1. The Noise Element of the General Plan indicates that to avoid future noise hazard, the maximum capacity design standard for highways and major roads will be used for determining the maximum future noise level or, in the case of freeways and airports, the estimated conditions 20 years in the future.

2. The exterior noise level shall not exceed 65 Ldn/CNEL.

3. The interior noise levels in residential dwellings shall not exceed 45 Ldn/CNEL.

In order to ensure a comprehensive discussion as to whether the Project would result in highway noise, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE. Would the Project result in:				
32. Other Noise. NA ☒ A ☐ B ☐ C ☐ D ☐	☐	☐	☐	☒

Source(s): Project Site Visit – April 10, 2018 by Matthew Fagan; and **Figure 2, *Aerial Photo with Project Components***.

Findings of Fact:

No Impact

The proposed Project is not anticipated to be affected by other types of noise as listed above (Sections 29, 30, and 31) and below (Section 33). No impacts will occur.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE. Would the Project result in:				
33. Noise Effects on or by the Project a) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☒	☐	☐	☐
b) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☒	☐	☐	☐
c) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
d) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☒	☐	☐	☐

Source(s): *Canterwood (Tentative Tract Map No. 37439) Noise Impact Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018 (*NIA*, **Appendix I**).

Findings of Fact:

a) *Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Potentially Significant Impact

No permanent increases in ambient noise levels are anticipated during the construction phase of the Project. Construction by its nature is temporary.

Operational noise sources would create permanent increases in ambient noise levels and would be those typically associated with single-family residences (automobiles, landscaping equipment, occasional parties). The Project site is located in an area that is primarily agricultural in nature with a few large lot single-family residences and due to this setting, the Project will result in a permanent increase in ambient noise levels above levels existing without the Project.

In addition, noise may be associated with the lift station. This may be a result of temporary operational functions or testing of the back-up generator system.

In order to ensure a comprehensive discussion as to whether the Project would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, this issue will be analyzed in the EIR.

b) *Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?*

Potentially Significant Impact

Due to the proximity of adjacent residences, immediately west of the Project site, the potential exists for significant temporary noise impacts from the proposed Project. Temporary increases in ambient noise levels will only occur during the construction phase and as a result of infrequent drainage facility maintenance. These impacts will be of short duration and will substantially decrease once the construction phase of the Project is completed. Precautions are taken to ensure the safety construction workers.

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers and portable generators that when combined can reach high levels.

The Project will be required to comply with Section 9.52.020 of the County's Noise Regulation ordinance, indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. This is included as **Standard Condition SC-NOI-1**, below. This is a standard condition and is not considered unique mitigation under CEQA.

Operationally, the Project will result in noise sources typical of residential developments and drainage facilities including personal vehicles, landscape equipment, flood control maintenance equipment and delivery and service vehicles. Periodic noises that may be generated by the proposed parking lots include landscaping maintenance, drainage facility maintenance, solid waste disposal, conversations and/or yelling in parking lots, vehicle doors closing, and car alarms.

In addition, noise may be associated with the lift station. This may be a result of temporary operational functions or testing of the back-up generator system.

In order to ensure a comprehensive discussion as to whether the Project would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project, this issue will be analyzed in the EIR.

c) *Would the Project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Potentially Significant Impact

Please reference the discussions in Sections 33.a and 33.b, above.

In order to ensure a comprehensive discussion as to whether the Project would result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, this issue will be analyzed in the EIR.

d) *Would the Project result in the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?*

Potentially Significant Impact

Temporary increases in ground-borne vibration or ground-borne noise levels will occur during the construction phase and infrequently during the operation of the drainage facilities. These impacts will be of short duration and will substantially decrease once the construction phase of the Project is completed.

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are typically heavy construction equipment and trucks. Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement.

Neither the County's General Plan nor Zoning Code 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.

Further, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction or operation phases but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. To control noise impacts associated with the construction of the proposed Project, the Project will be required to comply with **Standard Condition SC-NOI-1**, below. This is a standard condition and is not considered unique mitigation under CEQA.

In addition, vibrations may be associated with the lift station. This may be a result of temporary operational functions or testing of the back-up generator system.

In order to ensure a comprehensive discussion as to whether the Project would result in the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

SC-NOI-1 Section 9.52.020 of the County's Noise Regulation ordinance, indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PALEONTOLOGICAL RESOURCES. Would the Project:				
34. Paleontological Resources a) Directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature?	☐	☐	☒	☐

Source(s): *General Plan,* Figure OS-8, *Paleontological Sensitivity*; *Map My County*, (**Appendix A**); *Paleontological Resources Assessment Report Tentative Tract Map Number 37439,* prepared by CRM TECH, January 2, 2018 (*Paleontological Report*, **Appendix J**); and County Geologist.

Findings of Fact:

a) Would the Project directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature?

Less Than Significant Impact

The proposed Project site is mapped in the *General Plan* as having a "High Potential" for paleontological resources (fossils). This category encompasses lands for which previous field surveys and documentation demonstrates a low potential for containing significant paleontological resources subject to adverse impacts. As such, this Project is not anticipated to require any direct mitigation for paleontological resources. However, should fossil remains be encountered during the site grading phase, **Standard Condition SC-PAL-1** (Condition of Approval 060 – Planning-PAL), below, shall be implemented.

Standard Condition SC-PAL-1 is not considered unique mitigation under CEQA. Therefore, with adherence to **Standard Condition SC-PAL-1**, any Project impacts that could directly or indirectly destroy a unique paleontological resource, or site, or unique geologic features would be less than significant.

No additional analysis will be required in the DEIR.

Standard Conditions and Requirements:

SC-PAL-1 This site is mapped in the *General Plan* as having a "High Potential" for paleontological resources (fossils). Proposed project site grading/earthmoving activities could potentially impact this resource. HENCE:

PRIOR TO ISSUANCE OF GRADING PERMITS:

1. The applicant shall retain a qualified paleontologist approved by the County of Riverside to create and implement a project-specific plan for monitoring site grading/earthmoving activities (project paleontologist).

2. The project paleontologist retained shall review the approved development plan and grading plan and shall conduct any pre-construction work necessary to render appropriate monitoring and mitigation requirements as appropriate. These requirements shall be documented by the project paleontologist in a Paleontological Resource Impact Mitigation Program (PRIMP). This PRIMP

shall be submitted to the County Geologist for review and approval prior to issuance of a Grading Permit.

Information to be contained in the PRIMP, at a minimum and in addition to other industry standards and Society of Vertebrate Paleontology standards, are as follows:

1. Description of the proposed site and planned grading operations.
2. Description of the level of monitoring required for all earth-moving activities in the project area.
3. Identification and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring.
4. Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens.
5. Direction for any fossil discoveries to be immediately reported to the property owner who in turn will immediately notify the County Geologist of the discovery.
6. Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays.
7. Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates.
8. Procedures and protocol for collecting and processing of samples and specimens.
9. Fossil identification and curation procedures to be employed.
10. Identification of the permanent repository to receive any recovered fossil material. *Pursuant the County of Riverside "SABER Policy", paleontological fossils found in the County of Riverside should, by preference, be directed to the Western Science Center in the City of Hemet. A written agreement between the property owner/developer and the repository must be in place prior to site grading.
11. All pertinent exhibits, maps and references.
12. Procedures for reporting of findings.
13. 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 County 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 (eg. Professional Geologist), as appropriate. One original signed copy of the report(s) shall be submitted to the office of the County Geologist along with a copy of this condition and the grading plan for appropriate case processing and tracking. These documents should not be submitted to the project Planner, the Plan Check staff, the Land Use Counter or any other County office. In addition, the applicant shall submit proof of hiring (i.e. copy of executed contract, retainer agreement, etc.) a project paleontologist for the in-grading implementation of the PRIMP.

    Safeguard Artifacts Being Excavated in Riverside County (SABER).

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION AND HOUSING. Would the Project:				
35. Housing. a) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
d) Affect a County Redevelopment Project Area?	☐	☐	☐	☒
e) Cumulatively exceed official regional or local population projections?	☐	☐	☒	☐
f) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐

Source(s): Project Site Visit – April 10, 2018 by Matthew Fagan; *Map My County* (**Appendix A**); 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (*2016 RTP/SCS*); and *HV/WAP* Table 2, *Statistical Summary of Harvest Valley/Winchester Area Plan*.

Findings of Fact:

a) Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact

The proposed Project site is currently vacant. There are no structures or housing on the site. Therefore, implementation of the proposed Project will not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. No impacts will occur.

No additional analysis will be required in the EIR.

b) Would the Project create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?

No Impact

The proposed Project is a residential subdivision and, as such, supplies housing and does not create any additional demand for housing. Based on the setting for the Project, type of development, and size of units proposed, it is anticipated that the proposed Project would contribute to the supply of homes for those with above moderate income. It would not provide housing affordable to those with lower income. Therefore, implementation of the proposed

Project will not create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income. No impacts will occur.

No additional analysis will be required in the EIR.

c) *Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact

The proposed Project site is currently vacant. Therefore, implementation of the proposed Project will not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. No impacts will occur.

No additional analysis will be required in the EIR.

d) *Would the Project affect a County Redevelopment Project Area?*

No Impact

Since the dissolution of redevelopment areas statewide, there are no longer any County Redevelopment Project Areas. Therefore, implementation of the proposed Project cannot affect a County Redevelopment Project Area. No impacts will occur.

No additional analysis will be required in the EIR.

e) *Would the Project cumulatively exceed official regional or local population projections?*

Less Than Significant Impact

The Project proposes 574 single-family residences and would have a build-out population of approximately 1,756 persons (based on 3.06 persons per single-family residential household). This is consistent with the General Plan Land Use Designation of Medium Density Residential (MDR, 2-5 dwelling unit per acre). Although the Project proposes to change the zoning classification from R-1 (One-Family Dwellings) to R-4 (Planned Residential), the R-4 classification will allow densities anticipated within the General Plan Land Use designation MDR range. While this represents an incremental increase, any impacts would be considered less than significant. According to Table 2, Statistical Summary of the Harvest Valley/Winchester Area Plan (the *HVWAP* is the Area Plan in which the residential component of the Project is located), population is anticipated to be 112,797 people at buildout of the *HVWAP*. The Project represents approximately 1.56% of this population and was anticipated as part of the *HVWAP* projections.

Lastly, the General Plan Land Use designation of MDR was utilized for in the Southern California Association of Government's 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (*2016 RTP/SCS*). The *2016 RTP/SCS* is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The *2016 RTP/SCS* charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It outlines more than $556.5 billion in transportation system investments through 2040. The *2016 RTP/SCS* was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses

and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

While this represents an incremental increase, any impacts would not exceed official regional or local population projections and would therefore be considered less than significant.

No additional analysis will be required in the EIR.

f) Would the Project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Potentially Significant Impact

As discussed in Section 35.e, above the Project will result in a direct increase in population in the Project area; however, this population was anticipated locally in the *HVWAP*, and regionally in the *2016 RTP/SCS*.

The Project will also result in indirect impacts through the extension of roadways, drainage facilities and sewer facilities.

According to Section 15126.2(d) of the State CEQA Guidelines (Consideration and Discussion of Significant Environmental Effects – Growth-inducing Impact of the Proposed Project), the DEIR shall:

> "Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

In order to ensure a comprehensive discussion as to whether the Project would induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure), this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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:				
36. Fire Services.	☐	☐	☒	☐

Source(s): Ordinance No. 659 (An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program); and Google Maps.

Findings of Fact:

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 services?

Less Than Significant Impact

The Project site is served by the Riverside County Fire Department/CAL Fire. The closest station to the Project site is the Riverside County Menifee Lakes Fire Station-76, located at 29950 Menifee Road, Menifee, CA 92584. This station is located approximately 4 miles northwest of the Project site.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to fire services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for fire protection will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for fire services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 services, are considered incremental, and less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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:				
37. Sheriff Services.	☐	☐	☒	☐

Source(s): Ordinance No. 659 (An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program).

Findings of Fact:

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 sheriff services?

Less Than Significant Impact

The proposed Project would have law enforcement services available from the County Sheriff's Department and the California Highway Patrol. The California Highway Patrol has jurisdiction along the Interstate 15 and Interstate 215 freeways. The closest station to the Project site is the Civil Division Sheriff Department, located at 30755 Auld Rd l067, Murrieta, CA 92563. This station is located approximately 7 miles south of the Project site.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to sheriff services. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for sheriff services will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for sheriff services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 sheriff services, are considered incremental, and less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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:				
38. Schools.	☐	☐	☒	☐

Source(s): Menifee Union School District web site; and Perris Union High School District web site.

Findings of Fact:

Less Than Significant Impact

Implementation of the proposed Project will result in an incremental impact on the demand for school services. The Residential Project site components are located with the Menifee Union School District (MUSD), for kindergarten through 8th grades, and Perris Union High School District (PUHSD) for 9th-12th grades.

The following student generation factors are utilized by MUSD for single-family detached units:

- Elementary school: 0.3038/dwelling unit
- Middle school: 0.1396/dwelling unit

The following student generation factors are utilized by PUHSD for single-family detached units:

- High school: 0.1043/dwelling unit

Based on 574 residential units, the Project will generate the following approximate number of students:

- Elementary school: 175
- Middle school: 80
- High school: 60

MUSD was successful at the election conducted on November 8, 2016 in obtaining authorization from the District's voters to issue up to $135 million aggregate principal amount of the District's general obligation bonds ("Measure Q"). The election was conducted under Proposition 39, chaptered as the Strict Accountability in Local School Construction Bonds Act of 2000, at Section

15264 *et seq.* of the Education Code of the State. Measure Q funds will be used to acquire land and build two new elementary schools and one middle school to reduce overcrowding at existing schools; repair and renovate Menifee Valley Middle School and existing middle schools; fix roofs, heating, air conditioning, plumbing and electrical systems; and provide access for students with disabilities.

Impacts to MUSD and PUHSD facilities will be offset through the payment of impact fees to the MUSD and PUHSD, prior to the issuance of a building permit. MUSD and PUHSD residential rates are currently $2.73 per square foot, and $1.09 per square foot, respectively. This fee is subject to change, and the applicable fees, at time of building permit issuance, shall apply.

Payment of these fees (**Standard Condition SC-PS-2**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA. After payment of these fees, any impacts will be considered less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-PS-2 Prior to the issuance of a building permit for any each residential unit, the Project applicant shall pay the most recent developer fee to MUSD and PUHSD which is applicable at the time of building permit issuance.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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:				
39. Libraries.	☐	☐	☒	☐

Source(s): Ordinance No. 659 (An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program).

Findings of Fact:

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 libraries?

Less Than Significant Impact

Library impacts are typically attributed to residential development. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest

Valley/Winchester. DIF for single family residential for libraries will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for library services.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

With payment of the DIF, any impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 library services, are considered less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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:				
40. Health Services.	☐	☐	☒	☐

Source(s): *General Plan*.

Findings of Fact:

Less Than Significant Impact

The Project proposes 574 single-family residences and would have a build-out population of approximately 1,757 persons (based on 3.06 persons per single-family residential household). This increase in population to the Project area will create a need for additional health and medical services.

The Riverside County General Plan EIR states that impacts to medical facilities will be significant as a result of population increase. The following General Plan EIR Mitigation Measure (4.15.7A) was adopted with the County's General Plan in 2003 to aid in the reduction of significant impacts:

Mitigation Measure (4.15.7A):

> *Riverside County shall perform a periodic medical needs assessment to evaluate the current medical demand and level of medical service provided within each Area Plan. A periodic medical needs assessment shall be conducted every three years.*

As the County's population grows, new medical facilities will be required to provide health and medical services for an expanded population. Since the Project is consistent with the County's General Plan Land Use Plan designation of Community Development: Medium Density Residential (CD:MDR), the proposed Project's impact the County-wide health and medical facilities would be similar to what was anticipated in the County's General Plan.

Medical offices, urgent care clinics, local medical services, hospital beds and major facilities, such as trauma units and emergency rooms are available within proximity of the Project site. This fact, coupled with the Periodic Medical Needs Assessment, which is required by Mitigation Measure 4.15.7A of the County General Plan EIR, can ensure that adequate health and medical services are available to the Project residents. Based on this analysis, the potential impacts related to health services are considered less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION.				
41. Parks and Recreation. a) Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☒	☐	☐	☐
b) Would the Project include the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐	☐
c) Is the Project located within a C.S.A. or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?	☒	☐	☐	☐

Source(s): Ordinance No. 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications); Ordinance No. 659 (An Ordinance of the County of Riverside Amending Ordinance No. 659 Establishing a Development Impact Fee Program); and Parks and Open Space Department Review.

Findings of Fact:

a) Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Potentially Significant Impact

The Project proposes 574 single-family residences on 158.18 acres and would have a build-out population of approximately 1,757 persons (based on 3.06 persons per single-family residential household). This increase in population to the Project area will have a direct impact upon recreational facilities. Private and public recreational facilities are provided on-site and are included in the analysis for the Project. Section 10.35 A, B, and C of Ordinance No. 460 state the following as it pertains to parkland dedication:

"A. This section is adopted pursuant to Section 66477 of the Government Code which provides for the dedication of land or the payment of fees in lieu thereof for park and recreational facilities as a condition of approval of a tentative map or parcel map;

B. Whenever land that is proposed to be divided for residential use lies within the boundaries of a public agency designated to receive dedications and fees pursuant to this section, a fee and/or the dedication of land shall be required as a condition of approval of the division of land;

C. It is hereby found and determined by the Board of Supervisors that the public interest, convenience, health, welfare, and safety requires that three acres of land for each 1,000 persons residing within the County of Riverside shall be devoted to neighborhood and community park and recreational facilities unless a Community Parks and Recreation Plan, as approved by the Board of Supervisors, determines that the amount of existing neighborhood and

community park area exceeds that limit, in which case the Board determines that the public interest, convenience, health, welfare and safety requires that a higher standard, not to exceed five acres of land per 1,000 persons residing within the County, shall be devoted to neighborhood and community park and residential purposes."

The Project would generate the need for approximately 8.7 acres (at 5 acres per 1,000 persons). It is anticipated that public facilities will be provided on-site, and that the payment of in-lieu fees will not be required.

The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for park facilities will be required prior to the issuance of a certificate of occupancy. The Off-site Project components will not create any demand for park facilities.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

In order to ensure a comprehensive discussion as to whether the Project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, this issue will be analyzed in the EIR.

b) *Would the Project include the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

Potentially Significant Impact

Please reference the discussion in Section 41.a, above.

In order to ensure a comprehensive discussion as to whether the Project would include the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, this issue will be analyzed in the EIR.

c) *Is the Project located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?*

Potentially Significant Impact

Please reference the discussion in Section 41.a, above.

In order to ensure a comprehensive discussion as to whether the Project would be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees), this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION.				
42. Recreational Trails.	☒	☐	☐	☐

Source(s): *HV/WAP* Figure 9, *Harvest Valley/Winchester Area Plan Trails and Bikeway System; SC/MVAP* Figure 7, *Sun City/Menifee Area Plan Trails and Bikeway System*; and **Figure 5*, TTM 37439***.

Findings of Fact:

Potentially Significant Impact

Drainage Channels (Lots 577, 581, and 588) will be flanked on either side by a 16' wide maintenance road/hiking trail. Sidewalks will be provided along all Project streets, as well as within the paseos. A "Regional Trail: Urban/Suburban" (Trail Detail: Parks – 3001) may be installed along both Holland and Eucalyptus Roads along the Residential Project Site Components frontage. This is a 20'-wide (minimum) section, located outside of the ROW, with a 4'-wide (minimum) buffer separated from a 10'-wide (minimum) trail by a 48" high (minimum) split rail PVC fence; with another 2'-wide (minimum) buffer. The minimum overhead clearance shall be 12'. The trail will be a minimum 6" thick layer of decomposed granite. Reference **Figure 21*, Regional Trail: Urban/Suburban.***

Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic.

In order to ensure a comprehensive discussion as to whether the Project would have an impact on recreational trails, including those contained in the General Plan, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC. Would the Project:				
43. Circulation. a) Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Alter waterborne, rail or air traffic?	☐	☐	☐	☒
e) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒
f) Cause an effect upon, or a need for new or altered maintenance of roads?	☐	☐	☒	☐
g) Cause an effect upon circulation during the project's construction?	☐	☐	☒	☐
h) Result in inadequate emergency access or access to nearby uses?	☐	☐	☒	☐
i) Conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☒	☐	☐	☐

Source(s): *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis,* prepared by Urban Crossroads, Inc., June 5, 2018 (*TIA*, **Appendix K**); **Figure 5*, TTM 37439***; *Map My County, (***Appendix A**); *HVWAP* Figure 5, *Harvest Valley/Winchester Area Plan Airport Influence Area*; Figure 6, *Harvest Valley/Winchester Area Plan MJARB Airport Influence Area*; *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*; City-Data.com; *HVWAP,* Figure 8, *Harvest Valley/Winchester Area Plan Circulation*; **Figure 2, *Aerial Photo with Project Components***; Riverside Transit Agency (RTA) website; Riverside County Transportation Commission website; Ordinance No. 659 (An Ordinance of the County of Riverside Establishing a Development Impact Fee Program); Ordinance No. 824 (An Ordinance of the County of Riverside Authorizing Participation in the Western Riverside County Transportation Uniform Mitigation Fee Program); and Ordinance No. 461 (County of Riverside, State of California Road Improvement Standards and Specifications).

Findings of Fact:

a) *Would the Project conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

Potentially Significant Impact

A Project-specific *Traffic Impact Analysis,* prepared by Urban Crossroads, Inc., June 5, 2018 (*TIA*, **Appendix K**) has been prepared for the Project and is being approved by the County Transportation Staff. The *TIA* analyzed the following:

- Existing Conditions;
- Projected Future Traffic;
- Existing Plus Project Traffic Conditions;
- Existing Plus Ambient Growth Plus Project Traffic Conditions; and
- Existing Plus Ambient Growth Plus Project Plus Cumulative Traffic Conditions.

It should be noted that in addition to any Project-specific mitigation identified in the *TIA*, the developer will be required to pay the County of Riverside's Development Impact Fee (DIF) and the regional Transportation Uniform Mitigation Fee (TUMF) to address the direct and cumulative environmental effects generated by new development projects (reference **Standard Conditions SC-PS-1** and **SC-TR-1**, below, respectively. These are standard conditions and are not considered mitigation for CEQA implementation purposes.

In order to ensure a comprehensive discussion as to whether the Project would conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, this issue will be analyzed in the EIR.

b) *Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Potentially Significant Impact

Every county in California is required to develop a Congestion Management Program (CMP) that looks at the links between land use, transportation, and air quality. In its role as Riverside County's Congestion Management Agency, the Riverside County Transportation Commission (RCTC) prepares and periodically updates the county's CMP to meet federal Congestion Management System guidelines as well as state CMP legislation. The Southern California Association of Governments (SCAG) is required under federal planning regulations to determine that CMPs in the region are consistent with the Regional Transportation Plan. The RCTC's current Congestion Management Program was adopted in March 2011. Interstate 215 is included in the CMP.

The Riverside County Transportation Commission (RCTC) CMP does not require traffic impact assessments for development proposals. However, local agencies are required to maintain the minimum level of service thresholds included in their respective general plans. If a street or

highway segment included as part of the CMP falls below the adopted minimum level of service of E, a deficiency plan is required.

In order to ensure a comprehensive discussion as to whether the Project would conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, this issue will be analyzed in the EIR.

c) *Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

No Impact

The Residential Project site components are not located in an area which is governed by an airport master plan. The Off-site Project components are located within Zone E of the March Air Reserve Base / Inland Port Airport Influence Area.

According to the *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*, November 2014, Zone E has a low risk level as it is within the outer or occasionally used portions of flight corridors. Zone E has no limit on the number residential dwelling units permitted on a site, no restriction on the number of people per acre allowed on a site, and no open land requirement.

This criterion is not applicable to the Project. No impacts will occur.

No additional analysis will be required in the EIR.

d) *Would the Project alter waterborne, rail or air traffic?*

No Impact

There are no waterbodies that would support waterborne traffic in proximity of the Project site.

HVWAP Figure 8 shows a railroad line approximately 2.75 miles northerly of the nearest portion of the Project site. Based on the distance from this line, no adverse railroad noise impacts will occur at the Project site. No railway lines are located within the *HVWAP*. No impacts will occur.

The Residential Project site components are not located in an area which is governed by an airport master plan. The Off-site Project components are located within Zone E of the March Air Reserve Base / Inland Port Airport Influence Area.

According to the *March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan*, November 2014, Zone E has a low noise impact; it is beyond the 55-CNEL contour. Occasional overflights may be intrusive to some outdoor activities. Zone E has a low risk level as it is within the outer or occasionally used portions of flight corridors. Zone E has no limit on the number residential dwelling units permitted on a site, no restriction on the number of people per acre allowed on a site, and no open land requirement.

This criterion is not applicable to the Project. No impacts will occur.

No additional analysis will be required in the EIR.

e) Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

No Impact

Roadway improvements are proposed along the Project's residential component frontage, and internal to the Project. Roadways will be installed in conformance with Ordinance No. 461 and will be installed concurrently with other Project utilities or infrastructure facilities. Conditions of approval have been added to the Project to implement Ordinance No. 461. Therefore, implementation of the proposed Project will not create any roadways or road improvements that could increase hazards to a circulation system design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). No impacts will occur.

No additional analysis will be required in the EIR.

f) Would the Project cause an effect upon, or a need for new or altered maintenance of roads?

Less Than Significant Impact

The Project will result in an incremental impact for additional roadway maintenance; and it will result in impacts to new, roadway maintenance. Holland Road will be installed westerly of the Project site to Briggs Road, as well as roadways immediately adjacent to the Project site (Leon Road, Holland Road, Eucalyptus Road and Craig Avenue). All of these roadways will be assigned to the County of Riverside's roadway maintenance list, which requires maintenance to be continuing and on-going on an annual basis. According to the *TIA*, 5,425 average daily trips (ADTs) will be added at Project buildout (2025). Project traffic contribution to surrounding roadways and intersections will decrease as a percentage of the overall traffic, as additional development occurs over time.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to maintenance of roads. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. DIF for single family residential for road maintenance will be required prior to the issuance of a certificate of occupancy. The roadway Off-site Project components will create any demand for on-going maintenance.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Therefore, any impacts from the Project are considered less than significant.

No additional analysis will be required in the EIR.

g) Would the Project cause an effect upon circulation during the Project's construction?

Less Than Significant Impact

Construction of the proposed Project may temporarily affect the operation of the immediate circulation network during the construction phase of the Project. The Project will be required to obtain an encroachment permit prior to commencing any construction within the public right-of-way. This will also include the submittal and approval of a traffic control plan (TCP) which is

designed to mitigate any construction circulation impacts. **Standard Condition SC-TR-2**, below, has been included to require the preparation of the TCP. The TCP is a standard condition and is not considered unique mitigation under CEQA. Lastly, any impacts will be short-term and will cease once the construction phase is completed. Therefore, any impacts upon circulation during the Project's construction will be considered less than significant. No mitigation is required.

No additional analysis will be required in the EIR.

h) Would the Project result in inadequate emergency access or access to nearby uses?

Less Than Significant Impact

The Project will take access from existing roadways, and roadways that will be improved. These roadways will connect into part of an adopted emergency response plan/emergency evacuation plan, as implemented by the County of Riverside. Any Project impacts that would result in inadequate emergency access or access to nearby uses would be less than significant.

No additional analysis will be required in the EIR.

i) Would the Project conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?

Potentially Significant Impact

There is no local serving transit in the vicinity of the Project. The study area is currently served by the Riverside Transit Agency (RTA) with bus services along Antelope Road, Menifee Road and Scott Road via Route 61. Route 208 has services along the I-215 Freeway. At its closest point, Route 61 stops in the vicinity of Mt. San Jacinto College, approximately 2.74 miles west of the Project site. Route 208 does not stop in Menifee. The Project proposes no changes to this routing.

Drainage Channels (Lots 577, 581, and 588) will be flanked on either side by a 16' wide maintenance road/hiking trail. Sidewalks will be provided along all Project streets, as well as within the paseos. A "Regional Trail: Urban/Suburban" (Trail Detail: Parks – 3001) may be installed along both Holland and Eucalyptus Roads along the Residential Project Site Components frontage. This is a 20'-wide (minimum) section, located outside of the ROW, with a 4'-wide (minimum) buffer separated from a 10'-wide (minimum) trail by a 48" high (minimum) split rail PVC fence; with another 2'-wide (minimum) buffer. The minimum overhead clearance shall be 12'. The trail will be a minimum 6" thick layer of decomposed granite. Reference **Figure 21*, Regional Trail: Urban/Suburban***.

Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic.

In order to ensure a comprehensive discussion as to whether the Project would conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

SC-TR-1 The Board of Supervisors of the County of Riverside and the Councils of the Cities of Western Riverside County enacted the Transportation Uniform Mitigation Fee (TUMF) to fund the mitigation of cumulative regional transportation impacts resulting from future development. The mitigation fees collected through the TUMF program will be utilized to complete transportation system capital improvements necessary to meet the increased travel demand and to sustain current traffic levels of service.

The fee calculations are based on the proportional allocation of the costs of proposed transportation improvements based on the cumulative transportation system impacts of different types of new development. Fees are directly related to the forecast rate of growth and trip generation characteristics of different categories of new development. Payment of the TUMF is required and is not considered unique mitigation under CEQA.

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

SC-TR-2 The Applicant is required to develop and implement a County-approved Traffic Control Plan (TCP) addressing potential construction-related traffic detours and disruptions. In general, the TCP will ensure that to the extent practical, construction traffic would access the Project site during off-peak hours; and that construction traffic would be routed to avoid travel through, or proximate to, sensitive land uses.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC. Would the Project:				
44. Bike Trails.	☒	☐	☐	☐

Source(s): *HV/WAP* Figure 9, *Harvest Valley/Winchester Area Plan Trails and Bikeway System; SC/MVAP* Figure 7, *Sun City/Menifee Area Plan Trails and Bikeway System*; and **Figure 5*, TTM 37439***.

Findings of Fact:

Potentially Significant Impact

Drainage Channels (Lots 577, 581, and 588) will be flanked on either side by a 16' wide maintenance road/hiking trail. Sidewalks will be provided along all Project streets, as well as within the paseos. A "Regional Trail: Urban/Suburban" (Trail Detail: Parks – 3001) may be installed along both Holland and Eucalyptus Roads along the Residential Project Site Components frontage. This is a 20'-wide (minimum) section, located outside of the ROW, with a 4'-wide (minimum) buffer separated from a 10'-wide (minimum) trail by a 48" high (minimum) split rail PVC fence; with another 2'-wide (minimum) buffer. The minimum overhead clearance shall be 12'. The trail will be a

minimum 6" thick layer of decomposed granite. Reference **Figure 21, *Regional Trail: Urban/Suburban.***

Class II bicycle lanes, which are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel will be provided within the Craig Avenue and Leon Road frontages. All other bicycle lanes within the Residential Project Site Components will be Class III. Class III bicycle lanes are un-striped and provide for shared use with motor vehicle traffic.

In order to ensure a comprehensive discussion as to whether the Project would have an impact on recreational trails, including those contained in the General Plan, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRIBAL CULTURAL RESOURCES Would the project				
45.Tribal Cultural Resources a) Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 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: 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); or,	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in 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 for the purpose of this paragraph, the lead agency shall consider the significance to a California Native tribe.	☒	☐	☐	☐

Source(s): *Assembly Bill 52 (AB 52) Formal Notification (TTM 37439, CZ 1800007)*, prepared by County of Riverside, April 2, 2018 (**Appendix D)**.

Findings of Fact:

a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 Cultural Native American tribe, and that is 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)?

Potentially Significant Impact

Assembly Bill (AB) 52 specifies that a project that may cause a substantial adverse change to a defined Tribal Cultural Resource (TCR) may result in a significant effect on the environment. AB 52 requires tribes interested in development projects within a traditionally and culturally affiliated geographic area to notify a lead agency of such interest and to request notification of future projects subject to CEQA prior to determining if a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. The lead agency is then required to notify the tribe within 14 days of deeming a development application subject to CEQA complete to notify the requesting tribe as an invitation to consult on the project. AB 52 identifies examples of mitigation measures that will avoid or minimize impacts to a TCR. The bill makes the above provisions applicable to projects that have a notice of preparation or a notice of intent to adopt a negative declaration/mitigated negative declaration circulated on or after July 1, 2015. AB 52 amends Sections 5097.94 and adds Sections 21073, 21074, 2108.3.1.,

21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to the California PRC, relating to Native Americans.

Since the Project is within the tribe's traditional use area that was provided to the County by the tribes, AB 52 Notices were sent to the following nine (9) Tribes on April 2, 2018:

- Agua Caliente Band of Cahuilla Indians;
- Colorado River Indian Tribes (CRIT);
- Morongo Band of Mission Indians;
- Pala Band of Mission Indians;
- Pechanga Band of Mission Indians;
- Quechan Indian Nation;
- Ramona Band of Cahuilla Mission Indians;
- Rincon Cultural Resources Department; and
- Soboba Band of Luiseño Indians.

To ensure a comprehensive discussion as to whether the Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 Cultural Native American tribe, and that is 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), and to provide a detailed discussion of the consultation with the three Tribes, this issue will be analyzed in the EIR.

b) *Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 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 Cultural Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

Potentially Significant Impact

Please reference the discussion in Threshold 17.a, above.

To ensure a comprehensive discussion as to whether the Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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 Cultural Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITY AND SERVICE SYSTEMS. Would the Project:				
46. Water.	☒	☐	☐	☐
a) Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?				
b) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒	☐	☐	☐

Source(s): *Water Supply Assessment Report, Canterwood Project,* prepared by Eastern Municipal Water District, February 21, 2018 (*WSA*, **Appendix L1**); and *San 53* **(***Sewer and Water Availability) APNs 466-310-002, 466-310-026*, prepared by Eastern Municipal Water District, February 5, 2018 (*EMWD Letter*, **Appendix L2**).

Findings of Fact:

a) Would the Project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

Potentially Significant Impact

The Project will be required to tie into Eastern Municipal Water District water facilities. Due to the number of residential units, a Water Supply Assessment (WSA) was performed and was adopted by the Eastern Municipal Water District Board of Directors. The WSA concluded that there is adequate supply for the Project. However, in order to ensure a comprehensive discussion as to whether the Project would require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects, this issue will be analyzed in the EIR.

b) Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

Potentially Significant Impact

Please reference the discussion in Section 46.a, above. In order to ensure a comprehensive discussion as to whether the Project would have sufficient water supplies available to serve the Project from existing entitlements and resources, or if new or expanded entitlements needed, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITY AND SERVICE SYSTEMS. Would the Project:				
47. Sewer. a) Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?	☒	☐	☐	☐
b) Result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐

Source(s): *San 53* **(***Sewer and Water Availability) APNs 466-310-002, 466-310-026*, prepared by Eastern Municipal Water District, February 5, 2018 (*EMWD Letter* **Appendix L2**).

Findings of Fact:

a) Would the Project require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?

Potentially Significant Impact

The Project will be required to tie into Eastern Municipal Water District wastewater facilities. The Project will be extending a sewer line and will be installing a lift station. In order to In order to ensure a comprehensive discussion as to whether the Project would require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects, this issue will be analyzed in the EIR.

No septic facilities are proposed.

b) Would the Project result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Potentially Significant Impact

Please reference the discussion in Section 47.a, above. In order to ensure a comprehensive discussion as to whether the Project would result in a determination by the wastewater treatment provider that serves or may service the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, this issue will be analyzed in the EIR.

Standard Conditions and Requirements:

To be determined if necessary in the EIR.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITY AND SERVICE SYSTEMS. Would the Project:				
48. Solid Waste. a) Is the Project served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	☐	☐	☒	☐
b) Does the Project comply with federal, state, and local statutes and regulations related to solid wastes (including the CIWMP (County Integrated Waste Management Plan)?	☐	☐	☒	☐

Source(s): *General Plan*.

Findings of Fact:

a) Is the Project served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

Less Than Significant Impact

The Project site is located about 3.5 miles south of the El Sobrante Landfill and 42 miles southwest of the Lamb Canyon Landfill. The Lamb Canyon Landfill is located between the City of Beaumont and City of San Jacinto at 16411 Lamb Canyon Road (State Route 79). The landfill property 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 about 5,000 tons of refuse per day and had an estimated total disposal capacity of approximately 15.646 million tons as of June 30, 2009. As of January 2011, the landfill had a total remaining capacity of approximately 8.647 million tons. The current landfill remaining disposal capacity is estimated to last, at a minimum, until approximately 2021. During 2010 the Lamb Canyon Landfill accepted daily average volume of 1,703 tons and a period total of approximately 529,744 tons. Landfill expansion potential exists at this landfill site.

The El Sobrante Landfill is located east of Interstate 15 and Temescal Canyon Road to the south of the City of Corona and Cajalco Road at 1910 Dawson Canyon Road. The landfill is owned and operated by USA Waste of California, a subsidiary of Waste Management, Inc. It encompasses 1,322 acres, of which 645 acres are permitted for landfill operations. According to the El Sobrante operating permit, the Landfill has a total disposal capacity of approximately 209.91 million cubic yards and can receive up to 70,000 tons per week of refuse. The operating permit allows a maximum of 16,054 tons per day of waste to be accepted at the landfill, due to limitations on the number of vehicle trips per day. As of January 2011, the landfill had a remaining in-County disposal capacity of approximately 38.506 million tons. In 2010, the El Sobrante Landfill accepted a total of 694,963 tons, or approximately 0.695 million tons of waste generated within Riverside County. The daily average for in-County waste was 2,235 tons during 2010. The landfill is expected to reach capacity in approximately 2036. Development of all phases of the Project would be served by a landfill with sufficient permitted capacity to

accommodate the proposed Project's solid waste disposal needs. Impacts are considered incremental, yet less than significant.

No additional analysis will be required in the EIR.

b) Does the Project comply with federal, state, and local statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?

Less Than Significant Impact

The County evaluates solid waste generation based on a per capita generation rate. A residential solid waste generation rate of 13 lbs./residential unit per day was selected to forecast the daily and annual capacity of solid waste generation at full development, 574 single family residences. Average daily solid waste generation would be about 7,462 lbs. per day (3.73 tons). Annual average solid waste generation would be about 2,723,630 lbs. or about 1,362 tons per year. Assuming a mandatory 50% recycling rate, daily solid waste generation is forecast to be about 1.87 tons per day for disposal at either the El Sobrante Landfill or the Lambs Canyon Landfill. This is approximately one quarter per day or an increase in solid waste disposal of about 0.012% at either landfill. Thus, the proposed Project will consume some capacity of the existing landfills, but the level of adverse impact is considered less than significant. There is adequate capacity at the area landfills to accommodate the solid waste generated by the proposed Project, and the Project will comply with all laws and regulations in managing solid waste.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITY AND SERVICE SYSTEMS. Would the Project:				
49. Utilities. Would the Project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?				
a) Electricity?	☒	☐	☐	☐
b) Natural gas?	☒	☐	☐	☐
c) Communications systems?	☐	☐	☒	☐
d) Storm water drainage?	☒	☐	☐	☐
e) Street lighting?	☐	☐	☒	☐
f) Maintenance of public facilities, including roads?	☐	☐	☒	☐
g) Other governmental services?	☐	☐	☐	☒

Source(s): *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018 (*AQ Analysis*, **Appendix C**); *Canterwood (Tentative Tract Map No. 37439) Greenhouse Gas Analysis,* prepared by Urban Crossroads, Inc., August 8, 2018 (*GHG Analysis*, **Appendix F**).

Findings of Fact:

a) *Would the Project impact electricity facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?*

Potentially Significant Impact

The proposed future residences will consume electricity. Southern California Edison supplies electricity to the Project.

In order to ensure a comprehensive discussion as to whether the Project would impact electricity facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects, this issue will be analyzed in the EIR.

b) *Would the Project impact natural gas facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?*

Potentially Significant Impact

The proposed Project will be connected to The Gas Company's natural gas distribution system, and include the relocation of three existing high pressure gas lines. In order to ensure a comprehensive discussion as to whether the Project would impact natural gas facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects, this issue will be analyzed in the EIR.

c) *Would the Project impact communications systems facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?*

Less Than Significant Impact

The communication system is provided by Verizon. Verizon is a private company that provides connection to the communication system on an as needed basis. No expansion of facilities will be necessary to connect the Project to the communication system located adjacent to the Project site. Any impacts are considered less than significant.

No additional analysis will be required in the EIR.

d) *Would the Project impact storm water drainage facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects for storm water drainage?*

Potentially Significant Impact

Please reference the discussion in Sections 24 (Water Quality Impacts) and 25 (Floodplains). In order to ensure a comprehensive discussion as to whether the Project would impact storm water drainage facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects for storm water drainage, this issue will be analyzed in the EIR.

e) *Would the Project impact street lighting facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?*

Less Than Significant Impact

New streetlights will be installed by the proposed Project in accordance with standard requirements and County Ordinance No. 655. The installation of these lighting improvements is part of the proposed Project and with compliance with Ordinance No. 655, the installation and future operation of these street lights can be accomplished without causing significant adverse environmental impact. Any impacts from light and glare are discussed in Section 2 (Mt. Palomar Observatory) and Section 3 (Other Lighting Issues), above. Impacts are considered less than significant.

No additional analysis will be required in the EIR.

f) *Would the Project impact maintenance of public facilities, including roads requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?*

Less Than Significant Impact

The Project will result in an incremental impact for additional roadway maintenance; and it will result in impacts to new, roadway maintenance. Holland Road will be installed westerly of the Project site to Briggs Road, as well as roadways immediately adjacent to the Project site (Leon Road, Holland Road, Eucalyptus Road and Craig Avenue). All of these roadways will be assigned to the County of Riverside's roadway maintenance list, which requires maintenance to be continuing and on-going on an annual basis. Project traffic contribution to surrounding roadways and intersections will decrease as a percentage of the overall traffic, as additional development occurs over time.

As part of the Project approval(s), standard conditions are assessed on the proposed Project to reduce impacts from the proposed Project to maintenance of roads. This is reflected in Ordinance No. 659. The Residential Project site components are located in Area Plan 16 – Harvest Valley/Winchester. Development Impact Fees (DIF) for single family residential for road maintenance will be required prior to the issuance of a certificate of occupancy. The roadway Off-site Project components will create any demand for on-going maintenance.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Therefore, any impacts from the Project are considered less than significant.

No additional analysis will be required in the EIR.

g) Would the Project impact other governmental services, requiring or resulting in the construction of new facilities or the expansion of existing facilities; the construction of which could cause significant environmental effects?

No Impact

Regional Multi-Service Centers impacts are typically attributed to residential development. This is reflected in Ordinance No. 659. Regional Multi-Service Centers are located throughout the County and provide a variety of services on a regional basis with events ranging from: athletic programs, wellness programs, senior citizen activities, arts and crafts, etc.

The Project applicant shall comply with the provisions of Ordinance No. 659, which requires payment of the appropriate fees set forth in the Ordinance. Adherence to the Ordinance No. 659 (**Standard Condition SC-PS-1**, below) is typically a standard condition of approval and is not considered unique mitigation pursuant to CEQA.

Impacts from implementation of the proposed Project that would result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the 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 regional multi-service centers, are considered incremental, and less than significant.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

SC-PS-1 Prior to the issuance of a certificate of occupancy for any each residential unit, the Project applicant shall pay the most recent development impact fee which is applicable at the time of certificate of occupancy.

Mitigation: To be determined if necessary in the EIR.

Monitoring: To be determined if necessary in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITY AND SERVICE SYSTEMS. Would the Project:				
50. Energy Conservation. a) Would the Project conflict with any adopted energy conservation plans?	☐	☐	☐	☒

Source(s): Title 24 Building Energy Efficiency Standards.

Findings of Fact:

a) Would the Project conflict with any adopted energy conservation plans?

No Impact

Refer to the discussion under Section 49 above. The Project would increase the site's demand for energy compared to its existing undeveloped state. Specifically, the proposed Project would increase consumption of energy for space and water heating, air conditioning, lighting, and operation of miscellaneous equipment and appliances. The Project will comply with all Title 24 energy conservation requirements. The Title 24 Building Energy Efficiency Standards were developed by the CEC and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. Adherence to these efficiency standards would result in a "maximum feasible" reduction in unnecessary energy consumption. No conflict with any adopted energy conservation plans would occur if the proposed Project is implemented.

No additional analysis will be required in the EIR.

Standard Conditions and Requirements:

No standard conditions or required are applicable.

Mitigation: No mitigation measures are required.

Monitoring: No mitigation monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE.				
51. Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare, or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

Source(s): Sections 1-50, above.

Findings of Fact:

Potentially Significant Impact

In order to ensure a comprehensive discussion as to whether the Project will have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory, this issue will be analyzed in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE.				
52. Does the Project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of other current projects)?	☒	☐	☐	☐

Source(s): Sections 1-50, above.

Findings of Fact:

Potentially Significant Impact

To ensure a comprehensive discussion as to whether the Project will have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects), this issue will be analyzed in the EIR.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE.				
53. Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Source(s): Sections 1-50, above.

Findings of Fact:

Potentially Significant Impact

Based on the analysis of the Project's impacts in the responses to items 1 through 50, the Project may result in substantial adverse effects on human beings as it pertains to portions of these issue areas.

In order to ensure a comprehensive discussion as to whether the Project will have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly to those specific issue areas, they will be further analyzed in the EIR.

For those issue areas identified as having "no impact," or a "less than significant impact" it was determined in items 1 through 50 that the Project would not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. No additional analysis would be required in the EIR.

For those issue areas identified as having a "less than significant impact with mitigation required" it was determined in items 1 through 50 that the Project would not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly with the incorporation of mitigation measures. No additional analysis would be required in the EIR.

VI. EARLIER ANALYSES

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration as per California Code of Regulations, Section 15063 (c) (3) (D). In this case, a brief discussion should identify the following:

Earlier Analyses Used, if any:

Earlier Project-Specific Analyses Used, if any:

San Pedro Farms (TTM 36467) Project Environmental Assessment, EA # 42674 for Specific Plan No. 293 Substantial Conformance No. 7 (to SP293A5); Change of Zone 7825; and Tentative Tract Map No. 36467.

Nautical Cove (TTM 31229) Project Environmental Assessment, EA #39326 for Change of Zone 6903; and Tentative Tract Map No. 31229.

Initial Study and Mitigated Negative Declaration Wine Country Infrastructure Project State Clearinghouse No. 2012101055, prepared by K.S. Dunbar & Associates, Inc. Environmental Engineering, October 2012.

Consultation Summary Wine Country Infrastructure Project State Clearinghouse No. 2012101055, prepared by K.S. Dunbar & Associates, Inc. Environmental Engineering, December 2012.

Notice of Determination Initial Study and Mitigated Negative Declaration Wine Country Infrastructure Project State Clearinghouse No. 2012101055, prepared by County of Riverside, December 19, 2012.

Addendum No. 1 Initial Study and Mitigated Negative Declaration Wine Country Infrastructure Project State Clearinghouse No. 2012101055, prepared by K.S. Dunbar & Associates, Inc. Environmental Engineering, March 2014.

Location Where Earlier and Project-Specific Analysis, if used, are available for review:

Location: County of Riverside Planning Department
4080 Lemon Street, 12th Floor
Riverside, CA 92501

VII. AUTHORITIES CITED

- Authorities cited: Public Resources Code.
- References: California Government Code Section 65088.4.

VIII. SOURCES CITED

Assembly Bill 52 https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52

Assembly Bill 2881
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080AB2881

California Building Code (CBC) http://www.bsc.ca.gov/Home/Current2013Codes.aspx

City-Data.com http://www.city-data.com/airports/Pines-Airpark-Airport-Winchester-California.html;

County Ordinances http://www.rivcocob.org/ordinances/

Countywide Design Standards & Guidelines:
http://planning.rctlma.org/Portals/0/devproc/guidelines/Countywide/Countywide%20Design%20Standards%20and%20Guidelines%20-%20Final%20max.pdf?ver=2017-04-17-154322-140

GEOTRACKER website: http://geotracker.waterboards.ca.gov

Google Maps https://maps.google.com

HV/WAP
http://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/areaplans/HVWAP_120616.pdf?ver=2017-10-06-094250-633

March Air Reserve Base / Inland Port Airport Land Use Compatibility Plan
http://www.rcaluc.org/Plans/2014-March-AEB; City-Data.com http://www.city-data.com/airports/Pines-Airpark-Airport-Winchester-California.html

Menifee Union School District web site http://www.menifeeusd.org

mindat.org website: https://www.mindat.org/loc-3522.html

Perris Union High School District web site http://www.puhsd.org

Public Resources Code (PRC) §5020.1(j)
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5020.1;

2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (*2016 RTP/SCS*)
http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

Riverside County General Plan http://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx

Riverside County Regional- Park and Open-Space District 2009 Trail Development Standards
http://planning.rctlma.org/Portals/0/hearings/gpac/gpac072909/new_business/02_Discussion_Items/02_Circulation_Trails/02_Trails_Standards/Trail%20Development%20Standards.pdf

SC/MVAP
http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/area_plans/SCMVAP_120815m.pdf?ver=2016-04-01-101025-537

South Coast Air Quality Management District Final 2016 Air Quality Management Plan
http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp

The Department of Toxic Substances Control's Hazardous Waste and Substances Site List (Cortese List) web site: http://www.envirostor.dtsc.ca.gov

Title 14 of the California Code of Regulations (Sections 670.2 or 670.5)
https://govt.westlaw.com/calregs/Document/IA11C26A050EF11E495BAF4D9AEE54BFF?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1;

Title 14 California Code of Regulations (CCR) §15064.5(a)(1)-(3))
https://govt.westlaw.com/calregs/Document/IA0E0C760D48811DEBC02831C6D6C108E?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default).

Title 24 building requirements http://www.bsc.ca.gov/codes.aspx

Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)
https://www.gpo.gov/fdsys/granule/CFR-2010-title50-vol2/CFR-2010-title50-vol2-sec17-11;