

Draft Environmental Impact Report
SCH No. 2018051051
Environmental Review (ER) No. 2018-03



NICHOLS RANCH

City of Lake Elsinore, California

Lead Agency



City of Lake Elsinore
Planning Division
130 South Main Street
Lake Elsinore, CA 92530

Public Review Draft | March 19, 2019

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Nichols Ranch
City of Lake Elsinore, California

Lead Agency

City of Lake Elsinore
Planning Division
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Lake Elsinore, CA 92530

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Lead Agency Discretionary Permits

Planning Application 2017-29
General Plan Amendment (GPA No. 2018-01)
Specific Plan (SP No. 2018-01)
Specific Plan Amendment (SPA No. 2017-03)
Zone Change (ZC No. 2018-01)
Tentative Tract Map (TTM No. 37305)

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EIR TECHNICAL APPENDICES (BOUND SEPARATELY)

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- Appendix B: Urban Crossroads, Inc., 2018a. *Nichols Ranch Air Quality Impact Analysis*. August 29, 2018.
- Appendix C: VCS Environmental, Inc. 2018. *Biological Technical Report and MSHCP Consistency Analysis for the Nichols Ranch Project*. September 2018.
- Appendix D: Terracon Consultants, Inc. 2018. *Geotechnical Investigation and Geologic Evaluation Report*. February 2, 2018.
- Appendix E: Urban Crossroads, Inc., 2018b. *Nichols Ranch Greenhouse Gas Analysis*. August 29, 2018.
- Appendix F: Terracon Consultants, Inc. 2017. *Phase I Environmental Site Assessment Tentative Tract No. 37305 South of Nichols Road and East of Interstate 15 APNs 389-200-037, 389-210-008, and 389-210-032 Lake Elsinore, Riverside County, California 92532 Terracon Project No. 60177386*. December 27, 2017.
- Appendix G: FIREWISE 2000, Inc. 2018. *Fire Protection Plan Tract 37305 Nichols Ranch Specific Plan City of Lake Elsinore County of Riverside, California*. January 25, 2019.
- Appendix H: Brian F. Smith and Associates, Inc. 2018a. *A Phase I and II Cultural Resources Assessment for the Nichols Ranch Specific Plan Project City of Lake Elsinore, Riverside County, California*. July 17, 2017 [revised: April 27, 2018].
- Appendix I1: K&A Engineering, Inc. 2018a. *Preliminary Drainage Report for Tract 37305 Nichols South Specific Plan City of Lake Elsinore*. July 2018.
- Appendix I2: K&A Engineering, Inc. 2018b. *Preliminary Specific Water Quality Management Plan, Nichols Ranch Specific Plan*. November 2018.
- Appendix J: Urban Crossroads, Inc., 2018c. *Nichols Ranch Noise Impact Analysis*. January 2, 2019.
- Appendix K: Brian F. Smith and Associates, Inc. 2018b. *Paleontological Resource and Monitoring Assessment, Nichols Ranch Specific Plan Project, City of Lake Elsinore, Riverside County California*. June 21, 2017 [revised: April 26, 2018].
- Appendix L: Urban Crossroads, Inc., 2018d. *Nichols Ranch Traffic Impact Analysis City of Lake Elsinore*. December 18, 2018.



EIR TECHNICAL APPENDICES (BOUND SEPARATELY) – CONT'D

- Appendix M: Written Correspondence. (Refer to Section 7.5 for a full list of Project correspondence).
- Appendix N1: Dexter Wilson Engineering, Inc. *Water System Analysis for Tract No. 37305 in Lake Elsinore*. July 2018.
- Appendix N2: Dexter Wilson Engineering, Inc. *Preliminary Sewer System Evaluation for Tract No. 37305 in Lake Elsinore*. July 2018.



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ACRONYMS AND ABBREVIATIONS

<u>Acronym</u>	<u>Definition</u>
§	Section
<	less than
≤	less than or equal to
>	greater than
≥	greater than or equal to
AB	Assembly Bill
ac	acre(s)
AC	Asphalt Concrete
ACM	Alternative Calculation Method
ACOE	Army Corps of Engineers
A.D.	Anno Domini
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
AIA	Airport Influence Area
AIRFA	American Indian Religious Freedom Act
AIC	Arbuckle Gravelly Loam – 2 to 9 percent slopes, dry
AID	Arbuckle Gravelly Loam – 8 to 15 percent slopes
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
a.m.	Ante Meridiem (between the hours of midnight and noon)
AM	Ante Meridiem (between the hours of midnight and noon)
amsl	above mean sea level
ANSI	American National Standards Institute
A-P	Alquist-Priolo
APE	Area of Potential Effect
APN	Assessor Parcel Number
APS	Alternative Planning Strategy
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
AR4	4 th Assessment Report
ARSP	Alberhill Ranch Specific Plan
ASTM	American Society for Testing and Materials
AWS	All Way Stop
BAAQMD	Bay Area Air Quality Management District
B.C.	Before Christ
BFSA	Brian F. Smith and Associates (Project Technical Consultant)
bgs	below ground surface



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
BMPs	Best Management Practices
BUOW	Burrowing Owl
C&D	Construction & Demolition
C-SP	Commercial Specific Plan (land use designation)
C ₂ F ₆	Hexafluoroethane
C ₂ H ₆	Ethane
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAB	California Architects Board
CAGN	Coastal California Gnatcatcher
CalEEMod™	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPSSA	Criteria Area Plant Species Survey Area
CARB	California Air Resources Board
CASSA	Criteria Area Species Survey Area
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCC	California Climate Change
CCR	California Code of Regulations
CD	Consistency Determination
CDC	California Department of Conservation
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFCs	Chlorofluorocarbons
C ₂ F ₆	Hexafluoroethane



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
CF ₄	Tetrafluoromethane
CF ₃ CH ₂ F	HFC-134a
CFGC	California Fish and Game Code
CFMH	Crime Free Multi-Housing
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGC	California Government Code
CGS	California Geologic Survey
CH ₄	Methane
CH ₃ CHF ₂	HFC-152a
CHF ₃	HFC-23
CHJ	CHJ Consultants (Project Technical Consultant)
CIP	Capital Improvement Program
CIWMB	California Integrated Waste Management Board
CIWMP	California Integrated Waste Management Plan
CkF2	Cieneba Rocky Sandy Loam – 15 to 50 percent slopes, eroded
CIC	Cortina Gravelly Loamy Sand – 2 to 8 percent slopes
CLOMR	Conditional Letter of Map Revision
CMP	Congestion Management Program
CMU	Commercial Mixed Use (Zoning Designation)
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
COA	Condition(s) of Approval
COG	Council of Governments
COHb	carboxyhemoglobin
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COHb	carboxyhemoglobin
COP	Conference of the Parties
CPVC	Chlorinated Polyvinyl Chloride
CRMDP	Cultural Resource Monitoring and Discovery Plan
CRPR	California Rare Plant Ranking
CTC	California Transportation Commission
CTR	California Toxics Rule
CWA	Clean Water Act
CWC	California Water Code
cy	Cubic Yards



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
dB	Decibel
dBA	A-weighted Decibels
dBA Leq	A-weighted Decibels equivalent sound level
DBESP	Determination of Biologically Equivalent or Superior Preservation
DEH	Department of Environmental Health
DEIR	Draft Environmental Impact Report
DIF	Development Impact Fee
DMR	Division of Mine Reclamation
DOE	Determination of Eligibility
DOSH	Division of Occupational Safety and Health
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
du	Dwelling Unit
du/ac	dwelling units per acre
DWR	Department of Water Resources
E+P	Existing plus Project Conditions
EA	Existing plus Ambient
EAC	Existing plus Ambient plus Cumulative
EAP	Existing plus Ambient plus Project
EAPC	Existing plus Ambient plus Project plus Cumulative
EcD2	Escondido Fine Sandy Loam – 8 to 15 percent slopes, eroded
EDR	Environmental Data Resources, Inc.
e.g.	exempli gratia, meaning “for example”
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emission Factor Model
EMWD	Eastern Municipal Water District
EO	Executive Order
EPCRA	Emergency Planning and Community Right-to-Know Act
EPA	Environmental Protection Agency
EPS	Emission Performance Standard
ESA	Endangered Species Act
ESA	Environmental Site Assessment
ETo	Evapotranspiration
et seq.	et sequentia, meaning "and the following”
EVMWD	Elsinore Valley Municipal Water District



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIMA	Federal Insurance and Mitigation Administration
FIRM	Flood Insurance Rate Map (FEMA)
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FMMP	Farmland Mapping and Monitoring Program
FPP	Fire Protection Plan
ft.	foot
FTA	Federal Transit Administration
FYI	For Your Information
GBN	Ground-Based Noise
GBV	Ground-Based Vibration
GCC	Global Climate Change
GdC	Garretson Gravelly Very Fine Sandy Loam – 2 to 8 percent slopes
Gg	Gigagrams
GHG	Greenhouse Gas
GHGA	Greenhouse Gas Analysis
GIS	Geographic Information System
g/L	grams per Liter
Gov. Code	Government Code
GPA	General Plan Amendment
GPCD	Gallons per Capita per Day
gpd	gallons per day
gpd/ac	gallons per day per acre
GPLUA	No Project/General Plan Land Use Alternative
gpy	gallons per year
GSAs	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GWP	Global Warming Potential
H ₂ O	Water Vapor
HcC	Hanford Coarse Sandy Loam – 2 to 8 percent slopes
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
HCS	Highway Capacity Software
HD	Heavy Duty (Vehicles)
HFCs	Hydrofluorocarbons
HI	Hazard Index
HMBEP	Hazardous Materials Business Emergency Plan
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act
HOA	Homeowners' Association
hp-hr-gal	Horsepower hours per gallon
HSC	Health and Safety Code
HSWA	Hazardous and Solid Waste Amendments
HWCL	Hazardous Waste Control Law
I-15	Interstate 15
I-215	Interstate 215
IA	Implementing Agreement
ICAO	International Civil Aviation Organization
i.e.	that is
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
ITP	Incidental Take Permit
IWMA	Integrated Waste Management Act
IWMP	Integrated Waste Management Plan
IWUIC	International Wildland-Urban Interface Code
JPA	Joint Powers Authority
K&A	K&A Engineering (Project Technical Consultant)
kg	kilogram(s)
kWh	kilowatt-hour
lbs	pounds
LCA	Life-cycle analysis
LCFS	Low Carbon Fuel Standard
LDN	Day-Night Average Noise Level



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
LEA	Lead Enforcement Agency
LED	Light Emitting Diode(s)
LEMC	Lake Elsinore Municipal Code
Leq	Equivalent continuous sound level
LEUSD	Lake Elsinore Unified School District
LMD	Landscape Maintenance District
LOMR	Letter of Map Revision
LOS	Level of Service
LpF2	Lodo Rocky Loam – 25 to 50 percent slopes, eroded
LRA	Local Responsibility Area
LSA	Lake and Streambed Alteration Agreement
LSTs	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
MD	Medium Duty (Vehicles)
mgd	million gallons per day
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
MMTCO _{2e}	million metric tons of carbon dioxide equivalent
MOU	Memorandum of Understanding
mph	miles per hour
MPG	Miles per gallon
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MSW	Municipal Solid Waste
MTCO _{2e}	Metric Tons of Carbon Dioxide Equivalent
MWD	Metropolitan Water District
N ₂	Nitrogen
N ₂ O	Nitrous Oxide
N/A	Not Applicable
NACS	National Association of Convenience Stores
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
NCCP	Natural Community Conservation Planning
n.d.	no date
NDA	No Project/No Development Alternative
NDCs	Nationally Determined Contributions
NEPSSA	Narrow Endemic Plant Species Survey Area
NFIP	National Flood Insurance Program
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NIA	Noise Impact Analysis
NIOSH	National Institute for Occupational Safety and Health
NLR	Noise Level Reduction
NMFS	National Marine Fisheries Service
No.	Number
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act of 1977
NPRM	Notice of Proposed Rule Making
NPS	Non-Point Source(s)
NPS	National Park Service
NR	Noise Reduction
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRSP	Nichols Ranch Specific Plan
NPS	Non-point source
NTR	National Toxics Rule
NVIA	Noise and Vibration Impact Assessment
O ₂	Oxygen
O ₃	Ozone
OAL	Office of Administrative Law
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
Ord.	Ordinance
OSHA	Occupational Safety and Health Act
OSMRE	Office of Surface Mining Reclamation and Enforcement



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
Pb	Lead
PCB	Polychlorinated biphenyl
PeMS	Caltrans' Performance System Website
PFCs	Perfluorocarbons
PHF	Peak Hour Factor
p.m.	Post Meridiem (between the hours of noon and midnight)
PM	Post Meridiem (between the hours of noon and midnight)
PM _{2.5}	Fine Particulate Matter (2.5 microns or smaller)
PM ₁₀	Fine Particulate Matter (10 microns or smaller)
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRMA	Paleontological Resource and Monitoring Assessment
PRPA	Paleontological Resources Preservation Act
Pub. Res. Code	Public Resources Code
PUC	Public Utilities Commission
PV	Photovoltaic
QCB	Quino checkerspot butterfly
R-A	Residential Agricultural (Zoning Designation)
RCA	Regional Conservation Authority
RCB	Reinforced Concrete Box
RCDEH	Riverside County Department of Environmental Health
RCDWR	Riverside County Department of Waste Resources
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCFD	Riverside County Fire Department
RCHCA	Riverside County Habitat Conservation Agency
RCIT	Riverside County Information Technology
RCLIS	Riverside County Land Information System
RCP	Regional Comprehensive Plan
RCPLS	Riverside County Public Library System
RCRA	Resource Conservation and Recovery Act
RCSD	Riverside County Sheriff's Department
RCTC	Riverside County Transportation Commission
RCTLMA	Riverside County Transportation and Land Management Agency



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
REC	Recognized Environmental Condition(s)
RECLAIM	Regional Clean Air Incentives Market
REMEL	Reference Energy Mean Emission Level
RLAFCO	Riverside Local Agency Formation Commission
rms	root mean square
RMS	Root Mean Square
ROGs	Reactive Organic Gasses
ROW	Right-of-Way
RP	Reclamation Plan
RPS	Renewable Portfolio Standards
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
RWRF	Regional Water Reclamation Facility
SAA	Streambed Alteration Agreement
SAR	Second Assessment Report
SARA	Superfund Amendments and Reauthorization Act
SAWPA	Santa Ana Watershed Project Authority
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
SCH	California State Clearinghouse (Office of Planning and Research)
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
sf	square feet
s.f.	square foot or square feet
SF ₆	Sulfur Hexafluoride
SFP	School Facilities Program
SGMA	Sustainable Groundwater Management Act
SHA	Safe Harbor Agreement
SHMA	Urban Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SHS	State Highway System



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
SIP	State Implementation Plan
SKR	Stephens' Kangaroo Rat
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
SLF	Sacred Lands Files
SMARA	Surface Mining and Reclamation Act of 1975
SNUR	Significant New Use Rules
SO ₂	Sulfur Dioxide
SO ₄	Sulfates
SO _x	Sulfur Oxides
SOC	Statement of Overriding Considerations
SOI	Sphere of Influence
SP	Specific Plan
SP	Service Population
SPA	Specific Plan Amendment
SR-74	State Route 74
SR-91	State Route 91
SRA	Source Receptor Area
SRA	State Responsibility Area
SRRE	Source Reduction and Recycling Element
STC	Sound Transmission Class
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Regional Control Board
TAC	Toxic Air Contaminant(s)
TCHS	Temescal Canyon High School
TCL	Traditional Cultural Landscape
TCR	Tribal Cultural Resources
TIA	Traffic Impact Analysis
TIF	Traffic Infrastructure Fee
TIP	Transportation Improvement Plan
TIS	Traffic Impact Study
tpd	tons per day
TPM	Tentative Parcel Map
tpw	tons per week
TS/MRF	Transfer Station/Material Recovery Facility
TTM	Tentative Tract Map
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code



ACRONYMS AND ABBREVIATIONS (CONT'D)

<u>Acronym</u>	<u>Definition</u>
UNFCCC	United Nations Framework Convention on Climate Change
U.S.	United States
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
UV	Ultraviolet
UWMP	Urban Water Management Plan
VCS	VCS Environmental (Project Technical Consultant)
Vdb	Vibration Decibel
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
VPH	Vehicles per Hour
WDR	Waste Discharge Requirements
WMI	Watershed Management Initiative
WMIE	Waste Management of the Inland Empire
WMWD	Western Municipal Water District
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Association of Governments
WRF	Water Reclamation Facility
WRP	Waste Recycling Plan
WRRRA	Waste Reuse and Recycling Act
YBP	Years Before Present
ZC	Zone Change
ZORI	Zones of Required Investigation



S.0 EXECUTIVE SUMMARY

S.1 INTRODUCTION

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

This Environmental Impact Report (EIR), having California State Clearinghouse (SCH) No. 2018051051 was prepared in accordance with CEQA Guidelines Article 9, § 15120 to § 15132, to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed Nichols Ranch Project (hereafter, the "Project" or "proposed Project"). This EIR does not recommend approval, approval with modification, or denial of the proposed Project; rather, this EIR is a source of factual information regarding potential impacts that the Project may cause to the physical environment. The Draft EIR will be available for public review for a minimum period of 45 days.

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

This Executive Summary complies with CEQA Guidelines § 15123, "Summary." This EIR document includes a description of the proposed Project and evaluates the physical environmental effects that could result from Project implementation. The City of Lake Elsinore determined that the scope of this EIR should cover 18 subject areas. The scope was determined through an Initial Study drafted for the proposed Project, and the consideration of public comment received by the City in response to this EIR's Notice of Preparation (NOP). The Initial Study, NOP, and written comments received by the City in response to the NOP, are attached to this EIR as Technical Appendix A. As determined by the City of Lake Elsinore and in consideration of public comment on the NOP, the 18 environmental subject areas that could be reasonably and significantly affected by planning, constructing, and/or operating the proposed Project are analyzed herein, including:

- | | |
|----------------|---------------------------|
| 1. Aesthetics | 10. Land Use and Planning |
| 2. Air Quality | 11. Noise |



- | | |
|--|-----------------------------------|
| 3. Biological Resources | 12. Paleontological Resources |
| 4. Energy | 13. Population and Housing |
| 5. Geology and Soils | 14. Public Services |
| 6. Greenhouse Gas Emissions | 15. Recreation |
| 7. Hazards and Hazardous Materials | 16. Transportation and Traffic |
| 8. Historic and Archaeological Resources | 17. Tribal Cultural Resources |
| 9. Hydrology and Water Quality | 18. Utilities and Service Systems |

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

For each of the 18 subject areas analyzed in detail in Section 4.0, this EIR describes: 1) the physical conditions that existed at the approximate time this EIR's NOP was filed with the California State Clearinghouse (May 25, 2018) and/or that will exist following completion of reclamation activities on the northern 45.4 acres of the site; 2) discloses the type and magnitude of potential environmental impacts resulting from Project planning, construction, and operation; and 3) if warranted, recommends feasible mitigation measures with a proportional nexus to the Project's impacts that would reduce or avoid significant adverse environmental impacts that the proposed Project may cause. A summary of the proposed Project's significant environmental impacts and the mitigation measures imposed by the City of Lake Elsinore on the Project to lessen or avoid those impacts is included in this Executive Summary as Table S-1, *Summary of Impacts, Mitigation Measures, and Conclusions*. The City of Lake Elsinore applies mitigation measures which it determines 1) are feasible and practical for project applicants to implement, 2) are feasible and practical for the City of Lake Elsinore to monitor and enforce, 3) are legal for the City to impose, 4) have an essential nexus to the Project's impacts, and 4) would result in a benefit to the physical environment. CEQA does not require the Lead Agency to analyze an exhaustive list of every imaginable mitigation measure, or measures that are duplicative of mandatory regulatory requirements.

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

S.2 PROJECT SYNOPSIS

S.2.1 LOCATION AND REGIONAL SETTING

The Project site is located in the northeastern portion of the City of Lake Elsinore, California. Lake Elsinore is located within western Riverside County, which abuts San Bernardino County to the northeast, Orange County to the west, San Diego to the south, and Los Angeles County to the northwest. Figure 2-1, *Regional Map*, depicts the Project site's location within the regional vicinity. Riverside County is located in an urbanized area of southern California commonly referred to as the Inland Empire. The Inland Empire is an approximately 28,000 square mile region comprising Riverside County, San Bernardino County, and the eastern tip of Los Angeles County. The Southern California Association of Governments (SCAG) estimates that the SCAG region will grow to 22 million people by the year 2040 – an increase of nearly four million



people from the current population in the SCAG region (SCAG, 2016, p. 3). According to U.S. Census data, the 2010 population of Riverside County was 2,189,641 (USCB, 2016). SCAG forecast models predict that the population of Riverside County will grow to approximately 3,324,000 persons (an approximate 1.1 million persons increase) by the Year 2035 (SCAG, 2016).

The Project site is located east of and adjacent to I-15, south of Nichols Road, and west of Wood Mesa Court/El Toro Road. Access to the site is currently provided by Nichols Road and El Toro Road/Wood Mesa Court. The Project site encompasses Assessor Parcel Numbers (APNs) 389-200-038, 389-210-008, 389-210-032, 389-210-034, and 389-210-036 as illustrated on Figure 2-2, *Vicinity Map*, and Figure 2-3, *USGS Topographical Map*. The Project site is located within Section 25, Township 5 South, and Range 5 West, and is located at 32° 42' 27" North Longitude and 117° 21' 1" West Latitude.

The City of Lake Elsinore's prevailing planning document is its General Plan, dated 2011. Figure 2-5, *Existing General Plan Land Use Designations*, shows the land use designations assigned by the City of Lake Elsinore General Plan to the Project site and surrounding properties that are located within the City of Lake Elsinore. As shown, the City's General Plan designates the northern 45.4 acres of the Project site as "Specific Plan" (Alberhill Ranch Specific Plan, herein "ARSP") with an "Extractive Overlay." The Extractive Overlay provides for continued operations of extractive uses. The ARSP designates the northern 45.4 acres of the Project site for "Commercial – Specific Plan" land uses and allows for up to 380,000 s.f. of regional general commercial uses. The General Plan designates the southern 27.1 acres of the Project site as "General Commercial," which allow for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. (Lake Elsinore, 2011a, pp. 2-16 through 2-19 and Figure 2.1A; Lake Elsinore, 1997, p. 7)

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

S.2.2 PROJECT OBJECTIVES

The underlying purposes of the proposed Project are to develop a single-family residential community with commercial areas, as well as comply to the greatest feasible extent with applicable City of Lake Elsinore standards, codes, and policies. The following is a list of specific objectives that the proposed Project intends to achieve.

- A. To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.
- B. To establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.
- C. To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to Stovepipe Creek, where practical.



- D. To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Lake Elsinore and surrounding communities.
- E. To construct commercial and hotel uses within proximity to regional transportation facilities that will provide for employment opportunity and that can attract tenants at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local economy.
- F. To provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of Project residents and residents of surrounding communities.
- G. To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.
- H. To establish development phasing that results in logical coordinated growth.
- I. To develop the site with complementary mixed uses in a manner that preserves, to the extent feasible, natural drainages.

S.3 PROJECT SUMMARY DESCRIPTION

The proposed Project consists of applications for a General Plan Amendment (GPA No. 2018-01), Specific Plan (SP No. 2018-01), Specific Plan Amendment (SPA No. 2017-03), Zone Change (ZC No. 2018-01), and a Tentative Tract Map (TTM No. 37305), which collectively are being processed under Planning Application No. 2017-29 to establish a master-planned, low-medium-density residential community (5.1 to 5.8 dwelling units per acre) with commercial uses on an approximately 72.5-acre site. Approval of these applications would allow for development of the subject property with up to 168 dwelling units on minimum 4,500 s.f. lots, 14.5 acres commercial uses, and 8.3 acres of recreational uses. Associated improvements to the property would include roadway improvements, utility infrastructure, landscaping, exterior lighting, and water quality detention basins. The Project also would require connections to off-site utility lines. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-5, *Matrix of Project Approvals/Permits*, in Section 3.0, *Project Description*. A summary of the discretionary approvals sought by the Project Applicant is provided below.

- General Plan Amendment No. 2018-2018-01 (GPA No. 2018-01) proposes to redesignate the southern 27.1 acres of the Project site from “General Commercial” to “Specific Plan” land uses. With approval of GPA No. 2018-01 and the Project’s other discretionary applications, development of the entire 72.5-acre property would be governed by the proposed Nichols Ranch Specific Plan (SP No. 2018-01).
- The Project proposes Amendment No. 3.1 to the Alberhill Ranch Specific Plan (ARSP, SP No. 2017-03), which would remove the northern 45.4 acres of the Project site that are currently located within



the ARSP. With approval of the Project, development of the northern 45.4 acres of the Project site would be regulated by the Nichols Ranch Specific Plan (NRSP) instead of by the ARSP.

- Specific Plan No. 2018-01 proposes to establish the Nichols Ranch Specific Plan (NRSP) across the 72.5-acre site, which would allow for development of the site with 168 single-family residential homes on approximately 31.1 acres; 14.5 acres of commercial uses accommodating a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses; recreation uses on 8.3 acres; drainage basins on 5.5 acres; open space on 1.3 acres; and roadways on 5.3 acres. The NRSP also would establish development standards and design guidelines to provide guidance for future development of the site.
- Zone Change No. 2018-01 (ZC No. 2018-01) proposes to modify the zoning designation on the southern 27.1 acres of the site from “Commercial Mixed Use (CMU)” to “Nichols Ranch Specific Plan.” ZC No. 2018-01 also would change the zoning designation of the northern 45.4 acres of the site from “Alberhill Ranch Specific Plan” to “Nichols Ranch Specific Plan.” ZC No. 2018-01 also would establish zoning boundaries on-site to reflect the NRSP land use plan for the 72.5-acre site. Additionally, ZC No. 2018-01 would establish allowable uses and development standards for the 72.5-acre NRSP area.
- Tentative Tract Map No. 37305 (TTM No. 37305) proposes to subdivide the approximately ±72.50-acre site to implement the land uses proposed by the NRSP. TTM 37305 would create 168 residential lots on approximately 22.74 acres; one commercial retail lot on 14.43 acres; a sewer lift station lot on 0.13 acre; a park site lot on 6.49 acres; two drainage basin lots on 5.45 acres; nine (9) landscape lots on 1.45 acres; three (3) open space/landscape lots on 3.04 acres; two (2) open space lots on 6.49 acres; and public streets (Streets A through J) on 12.28 acres. TTM 37305 also identifies cross-sections for Nichols Road as well as internal roadways and identifies the improvements that would be constructed as part of the Project.

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

S.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

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

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City and identified during the Initial Study process. The EIR also addresses issues that were identified in the comment letters that the City of Lake Elsinore received on this EIR’s NOP (refer to *Technical Appendix A*). Environmental topics raised in comments to the NOP are summarized in Table 1-1, *Summary of NOP*



Comments, in Section 1.0, *Introduction*, of this EIR and include, but are not limited, to the topics of air quality; historic/archaeological resources; transportation and traffic; and tribal cultural resources.

S.5 PROJECT ALTERNATIVES

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

S.5.1 NO PROJECT / NO DEVELOPMENT ALTERNATIVE (NDA)

The No Project/No Development Alternative (NDA) considers no new development/disturbance on the Project site following completion of site reclamation activities beyond that which occurs under existing conditions. As such, the 72.5-acre Project site would consist of undeveloped land that is routinely disced as part of on-going fire abatement activities. Under this Alternative, no improvements would be made to the Project site and none of the Project's roadway, utility, and other infrastructure improvements would occur. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the Project site in its existing (i.e., post-reclamation) conditions, in conformance with CEQA Guidelines § 15126.6(e)(3)(B).

S.5.2 NO PROJECT / GENERAL PLAN LAND USE ALTERNATIVE (GPLUA)

The No Project/General Plan Land Use Alternative (GPLUA) considers development of the 72.5-acre Project site in accordance with the site's existing land use designations. For the northern 45.4 acres of the Project site, development would occur in conformance with the Alberhill Ranch Specific Plan (ARSP), which allows for up to 380,000 s.f. of regional general commercial uses. The southern 27.1 acres of the Project site would be developed in conformance with the underlying General Plan land use designation of "General Commercial," which allows for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. For purposes of analysis, it is assumed that the GPLUA would be developed to the maximum Floor Area Ratio (FAR) of 0.40 for the southern 27.1 acres of the site, which would allow for up to 472,190 s.f. of commercial area. Thus, this Alternative would allow for approximately 852,190 s.f. of general commercial building area, for an overall FAR of 0.27. This Alternative proposes a bridge crossing over Stovepipe Creek slightly to the east of the location of the Project's proposed crossing. Similar to the proposed Project, it is assumed that Stovepipe Creek would be preserved on site on 6.5 acres. Additionally, under this alternative there would be a connection to El Toro Road/Wood Mesa Court near the Project's southeastern boundary.

S.5.3 REDUCED PROJECT ALTERNATIVE

The Reduced Project Alternative (RPA) considers development of the Project site with a reduced number of dwelling units and commercial square footage in order to reduce the Project's significant and unavoidable



impacts to air quality and traffic/transportation. Specifically, the RPA accommodates up to 104 “Low-Medium Residential” dwelling units on 38.4 acres at an overall density of 2.7 dwelling units per acre (du/ac); 7.2 acres of “General Commercial” land uses, which could accommodate up to 125,453 s.f. of general commercial land uses (at a maximum Floor Area Ratio [FAR] of 0.40); 8.3 acres of “Recreational (Park)” land uses; 1.3 acres of “Open Space” land uses; “Public Institutional (Drainage Basin)” land uses on 5.5 acres; “Floodway” (open space) land uses on 6.5 acres; and 5.3 acres of backbone circulation facilities. Except for the reduction in the number of dwelling units and areas proposed for commercial, all remaining components of the RPA would be the same as the proposed Project, including areas subject to grading and disturbance. This alternative was selected for evaluation by the Lead Agency to compare the environmental effects of the proposed Project against an alternative that would reduce the Project’s significant and unavoidable impacts to air quality and traffic/transportation by reducing the total number of dwelling units and commercial square footage on the Project site.

S.6 SUMMARY OF IMPACTS, MITIGATION MEASURES, AND CONCLUSIONS

S.6.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

The scope of detailed analysis in this EIR includes 18 subject areas determined by the City of Lake Elsinore through the consideration of public comments received by the City on this EIR’s Initial Study and NOP. The Initial Study, NOP, and public comments received in response to the NOP, are attached to this EIR as *Technical Appendix A*. Only two subject areas: agriculture/forest resources and mineral resources were determined by the City of Lake Elsinore to have less-than-significant impacts requiring no further analysis in this EIR. This EIR addresses the topics of agriculture/forest resources and mineral resources in EIR Subsection 5.0, *Other CEQA Considerations*.

S.6.2 IMPACTS OF THE PROPOSED PROJECT

Table S-1, *Summary of Impacts, Mitigation Measures, and Conclusions*, provides a summary of the proposed Project’s environmental impacts, as required by CEQA Guidelines § 15123(a). Also presented are the mitigation measures recommended by the City of Lake Elsinore to further avoid adverse environmental impacts or to reduce their level of significance. After the application of all feasible mitigation measures, the Project would result in four significant and unavoidable environmental effects, as summarized below.

- **Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact.** Project construction- and operational-related air quality emissions would exceed the Regional Thresholds established by the SCAQMD for NO_x. No feasible mitigation measures exist to reduce the Project’s emissions of NO_x to below the applicable SCAQMD Regional Thresholds of significance. During construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. Accordingly, the Project’s significant direct and cumulatively-considerable impact due to a conflict with the SCAQMD 2016 AQMP would be significant and unavoidable. Additionally, Project construction and



operation would result in unavoidable direct and cumulatively-considerable impacts due to projected violations of an applicable air quality standard (NO_x) and the Project's substantial contribution to an existing air quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project's construction and operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-attainment (i.e., ozone); this also represents a significant and unavoidable direct and cumulatively-considerable impact of the proposed Project.

- Biological Resources: Significant and Unavoidable Direct Impact. Although the mitigation identified in EIR Subsection 4.3.7 would reduce the Project's impacts to biological resources to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP Conservation Criteria would require the conservation of most or all of the 45.4-acre MSHCP-Excluded Project Area, which inherently conflicts with the Project's primary objective to develop the site with residential, commercial, and recreational land uses. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the site represents a significant impact of the proposed Project that cannot be mitigated to below a level of significance.
- Transportation and Traffic: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Implementation of the proposed Project would result in a number of direct and cumulatively-considerable impacts to study area facilities. Unavoidable impacts would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; 2) although fair-share monetary contributions have been identified for the Project's cumulatively-considerable impacts, a funding program does not currently exist for the facility and it cannot be assured that required improvements would be in place prior to the facility experiencing a deficient LOS; and/or 3) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to transportation/traffic is presented in Table 4.16-34 through Table 4.16-38 in EIR Subsection 4.16, *Transportation and Traffic*.
- Transportation and Traffic: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Implementation of the proposed Project would result in a number of direct and cumulatively-considerable impacts to regional facilities identified in the 2011 Riverside County Congestion Management Plan (CMP). Unavoidable impacts to CMP facilities would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; and/or 2) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to CMP facilities is presented in n Table 4.16-34 through Table 4.16-38 in EIR Subsection 4.16, *Transportation and Traffic*.



Table S-1 Summary of Impacts, Mitigation Measures, and Conclusions

Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
4.1 Aesthetics				
Threshold a): No unique or scenic vistas would be impacted by the Project. The Project site does not contain any scenic vistas, nor does it offer unique views of any visually prominent features; therefore, impacts to scenic vistas resulting from the Project would be less than significant.	Less than Significant	CRDR 4.1-1 The Project is required to comply with the Development Standards and Design Guidelines of the proposed Nichols Ranch Specific Plan. Compliance with these Project design features which include but are not limited to guidelines for architecture, landscaping, and lighting, would be assured by the City's future review of implementing building permits for compliance with the Nichols Ranch Specific Plan.	Project Applicant/ Building & Safety Division	Prior to issuance of building permits
Threshold b): The Project would not be prominently visible to SR-74, an "Eligible State Scenic Highway – Not Officially Designated" due to intervening development and topography. The Project would affect views from I-15; however, the Project would be compatible with surrounding land uses and distant hillsides seen from I-15 are not prominent nor unique and would remain visible in the distance beyond the Project site. Impacts to scenic highway corridors would be less than significant.	Less than Significant	CRDR 4.1-2 The Project is required to comply with the City of Lake Elsinore's Zoning Code (Municipal Code Title 17), which regulates the character and use of property throughout the various zones in the City.	Project Applicant/ Planning Division	Prior to issuance of grading or building permits
Threshold c): The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas. The Project proposes residential and commercial development that would be similar in character and quality to development in the surrounding areas to the east, west, and south of the Project site.	Less than Significant			
Threshold d): The Project would not create substantial amounts of light or glare. Compliance with the City of Lake Elsinore Municipal Code Title 17, including § 17.112.040, and Chapters 17.16, 17.20, 17.36, and 17.40 would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.	Less than Significant			



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
4.2 Air Quality				
<p>Threshold a): No feasible mitigation measures exist to reduce the Project's emissions of NO_x to below the applicable SCAQMD Regional Thresholds of significance. During construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures already imposed on the proposed Project.</p>	Significant and Unavoidable	<p>MM 4.2-1 Prior to grading permit issuance, the City of Lake Elsinore shall verify the following note is included on the grading plan. Project contractors shall be required to ensure compliance with the note and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.</p> <ul style="list-style-type: none"> “During grading activities, all construction equipment greater than 150 horsepower shall consist of off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards. The construction contractor also shall ensure all equipment is tuned and maintained in accordance with the manufacturer's specifications. The construction contractor shall keep a log of all applicable construction equipment demonstrating compliance with these requirements, and the log shall be made available for inspection by City of Lake Elsinore staff upon request.” 	Project Applicant, Construction Manager/ Engineering Division	Prior to issuance of grading permits and during grading activities
<p>Threshold b): Project construction- and operational-related air quality emissions would exceed the Regional Thresholds established by the SCAQMD for NO_x. As noted above, during construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. Accordingly, the Project would result in unavoidable direct and cumulatively-considerable impacts due to projected violations of an applicable air quality standard (NO_x) and the Project's substantial contribution to an existing air quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project's construction and operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-attainment (i.e., ozone); this also</p>	Significant and Unavoidable	<p>CRDR 4.2-1 The Project is required to comply with the provisions of South Coast Air Quality Management District Rule 403, “Fugitive Dust” by implementing the following dust control measures during construction activities, such as earth moving activities, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the City shall verify that the following notes are included on the grading plan. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.</p>	Project Applicant, Grading Contractor/ SCAQMD, Building & Safety Division	Prior to issuance of grading permit and during grading



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>represents a significant and unavoidable direct and cumulatively-considerable impact of the proposed Project.</p> <p>Threshold c): With implementation of Mitigation Measure MM 4.2-1, construction-related emissions would not exceed the SCAQMD LSTs for any criteria pollutant during construction.</p> <p>Threshold d): During both construction and operation, the Project would not create objectionable odors affecting a substantial number of people. Impacts due to odors would be less than significant.</p>	<p>Less than Significant with Mitigation</p> <p>Less than Significant</p>	<ul style="list-style-type: none"> All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions. The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the midmorning, afternoon, and after work is done for the day. The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 mph or less. <p>CRDR 4.2-2 The Project is required to comply with the provisions of South Coast Air Quality Management District Rule 113, Table of Standards, by requiring that all architectural coatings must consist of low VOCs (i.e., VOCs of less than 100 grams per liter [g/L]) unless otherwise specified in the SCAQMD Table of Standards.</p> <p>CRDR 4.2-3 The Project is required to comply with applicable SCAQMD rules for construction activities on the Project site. SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1403 (Asbestos); Rule 1113 (Architectural Coatings); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust); and Rule 1186 / 1186.1 (Street Sweepers).</p> <p>CRDR 4.2-4 The Project is required to comply with the provisions of SCAQMD Rule 402, "Nuisance" which requires that a person shall not discharge air contaminants or other materials that would cause health or safety hazards to any considerable number of persons or the public.</p> <p>CRDR 4.2-5 The Project is required to comply with SCAQMD</p>	<p>Project Applicant, Construction Manager/ SCAQMD, Building & Safety Division</p> <p>Project Applicant, Construction Manager/ SCAQMD, Building & Safety Division</p> <p>Project Applicant, Project Residents/ SCAQMD</p> <p>Project</p>	<p>During architectural coating application</p> <p>During grading and construction</p> <p>During construction and long-term operation</p> <p>Prior to issuance</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development.</p> <p>CRDR 4.2-6 The Project has been designed to provide pedestrian connections along selected roads and trails within the development to provide access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.</p> <p>CRDR 4.2-7 The Project is designed to accommodate a mix of uses (i.e., residential, commercial, and recreational land uses) which would serve to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips.</p>	<p>Applicant/ Building & Safety Division</p> <p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Planning Division</p>	<p>of building permits</p> <p>Prior to issuance of occupancy permits</p> <p>Prior to issuance of building permits</p>
4.3 Biological Resources				
<p>Threshold a): With implementation of appropriate CRDRs, including the payment of fees, as well as implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5, Project impacts to species identified as a candidate, sensitive, or special status species are mitigated to less-than-significant levels.</p> <p>Threshold b): With implementation of Mitigation Measures MM 4.3-4 through MM 4.3-7, impacts to riparian habitat and other sensitive natural communities would be reduced to less-than-significant levels.</p> <p>Threshold c): Implementation of Mitigation Measures MM 4.3-4 and MM 4.3-6 would reduce to less-than-significant levels the Project's impacts to federally-protected wetlands as defined by Section 404 of the Clean Water Act.</p>	<p>Less than Significant with Mitigation</p> <p>Less than Significant with Mitigation</p> <p>Less than Significant with Mitigation</p>	<p>MM 4.3-1 Prior to the issuance of grading permits, the City of Lake Elsinore shall ensure that the following note is included on the Project's grading plans. Project contractors shall be required to ensure compliance with this note and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.</p> <p><i>"Vegetation clearing shall be conducted outside of the bird nesting season (February 1 to August 31) to the extent feasible. If avoidance of the nesting season is not feasible, a nesting bird survey shall be conducted by a qualified biologist within no more than 72 hours of such scheduled disturbance, to determine the presence of nests or nesting birds. If active nests are identified, the biologist shall establish appropriate buffers around the vegetation (typically 500 feet for raptors</i></p>	<p>Project Applicant/ Engineering Division</p>	<p>Prior to issuance of grading permits and during ground-disturbing activities</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>Threshold d): The Project site lacks migratory wildlife corridors and wildlife nursery sites and does not occur within MSHCP Cores or Linkages. The Project would preserve and avoid the on-site portion of Stovepipe Creek and preserve the majority of the sage scrub habitats located on-site which serve as local wildlife corridors, thereby reducing impacts to native resident or migratory wildlife corridors and wildlife nursery sites to less-than-significant levels.</p>	Less than Significant	<p><i>and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers shall be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest). The biologist shall review and verify compliance with these nesting boundaries and shall verify the nesting effort has finished. Work may resume within the buffer area when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the City of Lake Elsinore for mitigation monitoring compliance record keeping. If vegetation removal is not completed within 72 hours of a negative survey during nesting season, the nesting survey must be repeated to confirm the absence of nesting birds."</i></p>		
<p>Threshold e): The Project Applicant would be required to pay SKR fees pursuant to Lake Elsinore Municipal Code Chapter 19.04. For the southern 27.1 acres of the Project site, the Project Applicant would be required to pay MSHCP fees pursuant to Lake Elsinore Municipal Code Chapter 16.85. The Project Applicant would be exempt from the fee requirements of Lake Elsinore Municipal Code Chapter 16.85 for the northern 45.4 acres of the site because the Project's impacts in the northern portions of the site would not be covered under the MSHCP. In addition, the Project would not conflict with the City's palm tree preservation program (Chapter 5.116 of the Lake Elsinore Municipal Code).</p>	Less than Significant	<p><i>and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers shall be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest). The biologist shall review and verify compliance with these nesting boundaries and shall verify the nesting effort has finished. Work may resume within the buffer area when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the City of Lake Elsinore for mitigation monitoring compliance record keeping. If vegetation removal is not completed within 72 hours of a negative survey during nesting season, the nesting survey must be repeated to confirm the absence of nesting birds."</i></p>		
<p>Threshold f): Although the required mitigation would reduce the Project's impacts to biological resources to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP Conservation Criteria would require the conservation of most or all of the 45.4-acre MSHCP-Excluded Project Area, which inherently conflicts with the Project's primary objective to develop the site with residential, commercial, and recreational land uses. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the site represents a significant impact of the proposed</p>	Significant and Unavoidable	<p>MM 4.3-2 In accordance with MSHCP Objective 6, prior to issuance of grading permits or other permits authorizing ground disturbance, the Project Applicant shall retain a qualified biologist to perform a pre-construction burrowing owl survey. The pre-construction burrowing owl survey shall occur within the Burrowing Owl Survey Area where suitable habitat is present within 30 days prior to Project commencement of any ground-disturbing activities at the Project site. If active burrowing owl burrows are detected during the breeding season, all work within an appropriate buffer (typically a minimum 300 feet) of any active burrow shall be halted until that nesting effort is finished. The on-site biologist shall review and verify compliance with these boundaries and shall verify the nesting effort has finished. Work can resume in the buffer when no other active burrowing owl burrows nests are found within the buffer area. If active</p>	Project Applicant, Project Biologist/ Planning Division	Prior to issuance of grading permits and during ground-disturbing activities



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
Project that cannot be mitigated to below a level of significance.		<p>burrowing owl burrows are detected outside the breeding season or during the breeding season and its determined nesting activities have not begun, then passive and/or active relocation may be approved following consultation with CDFW. The installation of one-way doors may be installed as part of a passive relocation program. Burrowing owl burrows shall be excavated with hand tools by a qualified biologist when determined to be unoccupied, and back filled to ensure that animals do not re-enter the holes/dens. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to CDFW. A copy of the results of the pre-construction survey (and all additional surveys), as well as copies of the Burrowing Owl Management Plan, if required, shall be provided to the City of Lake Elsinore Planning Division for review and approval (in the case of the Burrowing Owl Management Plan) prior to any vegetation clearing and ground disturbance activities.</p> <p>MM 4.3-3 Prior to issuance of grading permits or other permits authorizing ground disturbance that would commence during the breeding season of bat species potentially utilizing the site (April 1 through August 31), the Project Applicant shall retain a qualified biologist to conduct a pre-construction survey to determine if active bat roosts are present on the Project site. The survey shall be conducted no earlier than 72 hours prior to commencement of vegetation removal that would occur during the bat breeding season. If work begins outside of breeding season, no roosting bats are found, or if bats have not established an active maternity roost, no further mitigation is required. If an established maternity roost is found, either (1) postpone or halt construction within 200 feet of the roost until the roost is vacated and juveniles have fledged, or (2) require that a qualified biologist develop alternative measures, such as biological monitoring during active construction within the 200-foot buffer to ensure</p>	Project Applicant, Project Biologist/ Planning Division	Prior to issuance of grading permits and during ground-disturbing activities



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>established maternity roosts are not impacted. In the event ground-disturbing activities do not commence within 72 hours of the most recent survey, an additional survey shall be conducted within 72 hours of ground-disturbing activities. A copy of the results of the pre-construction survey(s) (and all additional surveys), shall be provided to the City of Lake Elsinore Planning Division for review prior to any vegetation clearing and ground disturbance activities.</p> <p>MM 4.3-4 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Lake Elsinore Planning Division that impacts to 0.23 acre of Riversidean Sage Scrub and 0.07 acre of Riversidean Alluvial Fan Sage Scrub have been compensated for at a minimum 2:1 ratio (impact: mitigation) through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location. It should be noted that the 0.14-acre compensatory mitigation required by this mitigation measure for impacts to Riversidean Alluvial Fan Sage Scrub is included in, and is not in addition to, the mitigation requirements specified by Mitigation Measure MM 4.3-6.</p> <p>MM 4.3-5 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Lake Elsinore Planning Division that impacts to 0.28 acres of disturbed Riversidean sage scrub (including Disturbed Riversidean Sage Scrub – Encelia dominant) have been compensated for at a minimum 1:1 ratio (impact: mitigation) through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location.</p> <p>MM 4.3-6 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Lake Elsinore</p>	<p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Planning Division</p> <p>Project Applicant/</p>	<p>Prior to issuance of grading permits</p> <p>Prior to issuance of grading permits</p> <p>Prior to issuance of grading permits</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Planning Division that impacts to 0.42 acre of streambed waters of the State have been compensated for at a minimum 2:1 ratio through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location. It should be noted that the 0.14-acre of Riversidean Alluvial Fan Sage Scrub mitigation required by Mitigation Measure MM 4.3-4 is included within (and not in addition to) the 0.84-acre of compensatory mitigation for streambed waters required by this mitigation measure.</p> <p>MM 4.3-7 Prior to the issuance of a grading permit, the proposed Project shall obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters subject to Regional Water Quality Control Board and the California Department of Fish and Wildlife. Authorizations anticipated for this Project include, but are not necessarily limited to, Waste Discharge Requirements from the RWQCB and a Section 1600 Streambed Alteration Agreement from the CDFW.</p> <p>CRDR 4.3-1 The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to City of Lake Elsinore Municipal Code Chapter 16.85 for the southern 27.1 acres. Fees shall be paid in compliance with Municipal Code Chapter 16.85.</p> <p>CRDR 4.3-2 The Project Applicant shall make payment of SKR HCP fees pursuant to City of Lake Elsinore Municipal Code Chapter 19.04. Fees shall be paid in compliance with Municipal Code Chapter 19.04.</p> <p>CRDR 4.3-3 To ensure compliance with the Western Riverside County MSHCP, the following shall be required:</p>	<p>Planning Division</p> <p>Project Applicant/ Planning Division, RWQCB, CDFW</p> <p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Planning Division, Building & Safety</p>	<p>Prior to issuance of grading permits</p> <p>Prior to issuance of building permits</p> <p>Prior to issuance of grading permits</p> <p>Prior to issuance of grading and/or building permits</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<ul style="list-style-type: none">As part of its review of implementing discretionary applications (e.g., building permits), the City of Lake Elsinore shall assure that landscaping plans do not include the use of invasive plant species listed in Volume I, Table 6-2 of the MSHCP or in Table IV-2, Prohibited Plant List, of the Nichols Ranch Specific Plan.Prior to approval of grading permits, the Project's construction contractor shall develop and implement a Storm Water Pollution Prevention Program (SWPPP) to address runoff and potential water quality degradation during construction.All construction plans (i.e., grading permits, building permits, etc.) shall include the following note, compliance with which shall be assured by the construction contractor: <i>"During any nighttime construction activities, all lighting shall direct lighting away from the preserved on-site drainage and associated habitat."</i>	Division, Engineering Division	
4.4 Energy				
Thresholds a) and b): There are no adopted state or local plans for renewable energy or energy efficiency in the Project area. Additionally, the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Impacts due to energy demand would be less than significant.	Less than Significant	Impacts due to the Project's energy demands would be less than significant and mitigation is not required.	N/A	N/A
4.5 Geology and Soils				
Threshold a): Implementation of Mitigation Measure MM 4.4-1 would ensure that the Project implements the recommendations of the Project's geotechnical study (Technical Appendix D), which in turn would ensure measures are implemented to address potential impacts due to the exposure of people or structures to adverse effects, including loss, injury, or death as a result of strong seismic ground shaking. Implementation of the required mitigation would	Less than Significant with Mitigation	MM 4.5-1 Prior to issuance of grading or building permits, the City Building and Safety Division shall verify that all of the recommendations given in the Project's February 2, 2018 "Geotechnical Investigation and Geologic Evaluation Report Tentative Tract No. 37305 Lake Elsinore, California" by CHJ Consultants, are incorporated into the construction and grading plans. The recommendations shall include, but not be limited to the following:	Project Applicant, Project Grading Contractor; Building & Safety Division; Engineering Division	Prior to issuance of grading permits and during grading operations



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>ensure that impacts are reduced to less-than-significant levels.</p> <p>Threshold b): The Project would not result in substantial soil erosion or loss of topsoil. The Project Applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities and adhere to a Storm Water Pollution Prevention Plan (SWPPP) as well as SCAQMD Rule 403 and City of Lake Elsinore Municipal Code Chapters 14.08 and 15.04. With mandatory compliance to these regulatory requirements, the potential for water and wind erosion impacts during construction would be less than significant. Following development, wind and water erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, the Project is required by law to implement a WQMP during operation, which would preclude substantial erosion impacts in the long-term.</p> <p>Threshold c): Implementation of Mitigation Measure MM 4.4-1 would ensure that the Project implements the recommendations of the Project's geotechnical study (Technical Appendix D), thereby ensuring that measures are incorporated into the Project's design to preclude impacts associated with lateral spreading, liquefaction, and collapse. With implementation of the required mitigation, impacts would be less than significant.</p> <p>Threshold d): The Project site contains soils with low susceptibility to expansion. Potential hazards associated with expansive soils would, thus, be less than significant.</p>	<p>Less than Significant</p> <p>Less than Significant with Mitigation</p> <p>Less than Significant</p>	<ul style="list-style-type: none"> Perform earthwork in accordance with the General Earthwork and Grading Specifications in Technical Appendix D. The recommendations contained in Technical Appendix D, are general grading specifications provided for typical grading projects and some of the recommendations may not be strictly applicable to the proposed Project. <p>The contract between the Project Applicant and earthwork contractor shall be worded such that it is the responsibility of the contractor to place fill properly in accordance with the recommendations of the Geotechnical Report, the specifications in Appendix D of the Geotechnical Report, applicable County City Grading Ordinances, notwithstanding the testing and observation of the geotechnical consultant during construction.</p> <ul style="list-style-type: none"> Existing vegetation, trash, debris, and other deleterious materials shall be removed and wasted from the site prior to commencing removal of unsuitable soils and placement of compacted fill materials. Additionally, all pre-existing foundations elements, standpipes, irrigation lines, and utility conduits shall be removed and wasted off-site. Concrete can be placed in the fill provided it is broken down into pieces smaller than 12 inches (largest dimension). Cesspools and septic systems shall be properly removed and/or backfilled in accordance with the local governing agency. Soil, undocumented fills, alluvium, weathered portions of the older alluvium, and bedrock shall be removed in areas planned to receive compacted fill intended to support settlement-sensitive structures such as buildings, roads and underground improvements. The resulting undercuts shall be replaced with engineered fill. It shall be noted that local 		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
Threshold e): No septic tanks or alternative wastewater disposal systems are proposed to be installed on the Project site. Accordingly, no impact would occur associated with soil compatibility for wastewater disposal systems.	Less than Significant	<p>variations can be expected requiring an increase in the depth of removal for unsuitable and weathered deposits. The extent of removals can best be determined in the field during grading when observation and evaluation can be performed by the soil engineer and/or engineering geologist. Removal bottoms shall expose saturated ($S > 85\%$) alluvium, very old alluvial fan deposit, and/or bedrock. The removal bottom shall be observed and mapped by the engineering geologist prior to fill placement. The bottoms shall be scarified to a depth of approximately six (6) inches, brought to near optimum moisture content and recompact to at least 93 percent relative compaction in accordance with ASTM D1557.</p> <ul style="list-style-type: none">▪ Footings for any structures shall not be allowed to span from cut to fill or from shallow fill to deep fill soil conditions. Should grading result in a situation where footings bear on more than eight (8) feet of compacted fill, the sub-excavation of the building pad shall be deepened as necessary so as to provide a uniform fill mat below bottom of footing. The deepening of sub-excavation will involve additional removals of older alluvium or bedrock. The uniform mat shall not vary in thickness from one (1) side of the building pad area to the other by more than 50 percent, 10 feet maximum. The "building pad area" includes the structure footprint and the zone of influence consisting of a 1(h):1(v) downward projection from the structure footing. <p>All footing shall rest entirely upon competent native soils or minimum of 12 inches of properly compacted fill material. The sub-excavation shall extend at least two (2) feet laterally beyond the footing lines, where possible. Foundation concrete shall be placed in neat excavations with vertical sides, or the concrete shall be formed and the excavations</p>		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>properly backfilled as recommended for compacted fill.</p> <p>The on-site soils shall provide adequate quality fill material, provided they are free from roots, other organic matter and deleterious materials. Rock or similar irreducible material with a maximum dimension greater than six (6) inches shall not be buried or placed within the top 10 feet of fills. Import fill shall be inorganic, non-expansive, granular soil free from rocks or lumps greater than six (6) inches in maximum dimension. The contractor shall notify the geotechnical engineer of import sources sufficiently ahead of their use so that the sources can be observed and approved as to the physical characteristic of the import material. Fills shall be spread in near-horizontal layers, approximately eight (8) inches in thickness.</p> <ul style="list-style-type: none">▪ The contractor shall make their own investigations and estimates of shrinkage. Final grades shall be adjusted and/or contingency plans to import or export material shall be made to accommodate possible variations in actual quantities during site grading.▪ Materials between approximately 12 and 48 inches in size may be placed in areas of fill depth greater than approximately 20 feet below finish grade with the approval of the building official. Areas shall be designated on plans as rock disposal areas. The oversized rock shall be placed in windrows and adequately spaced to prevent nesting. Then, sandy matrix material shall be flooded between the rocks to fill any void spaces. Continuous observation of the rock placement and flooding operation shall be conducted by the geotechnical engineer.		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<ul style="list-style-type: none">All grades shall provide effective drainage away from the buildings during and after construction and shall be maintained throughout the life of the structures. Water retained next to the building can result in soil movements greater than those discussed in the Project's geotechnical report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roofs shall have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the buildings. The Project shall have a minimum horizontal setback distance of 10 feet from the perimeter of any building and the high-water elevation of the nearest stormwater retention basin. Setbacks for structures shall be maintained from the steep slopes in Stovepipe Wash. The Project shall have a minimum horizontal distance equivalent to 1.5 times the height of the slope be maintained for all structures from the top of the slope. If significant erosion/scour is expected to occur along Stovepipe Wash, greater setbacks would be necessary.Exposed ground should be sloped and maintained at a minimum three (3) percent away from the buildings for at least 10 feet beyond the perimeter of the buildings. After building construction and landscaping, final grades shall be verified to document effective drainage has been achieved. Grades around the structures shall also be periodically inspected and adjusted as necessary as part of the structures' maintenance program.Shallow excavations for the proposed building structures are anticipated to be accomplished with conventional construction equipment except for the area of hard bedrock in the west portion of the Nichols Road grading project.		



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		<p>Upon completion of filling and grading, care shall be taken to maintain the subgrade water content prior to construction of floor slabs. Construction traffic over the completed subgrades shall be avoided. The site shall be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over, or adjacent to, construction areas shall be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material shall be removed, or the materials shall be scarified, moisture conditioned, and recompact, prior to floor slab or pavement construction. At a minimum, excavations shall be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or State regulations.</p> <ul style="list-style-type: none">▪ The earthwork efforts shall be monitored under the direction of the geotechnical engineer. Monitoring shall include documentation of adequate removal of vegetation and top soil, proof-rolling and mitigation of areas delineated by the proof-roll to require mitigation. <p>Each lift of compacted fill shall be tested, evaluated, and reworked as necessary until approved by the geotechnical engineer prior to placement of additional lifts. Each lift of fill shall be tested for density and water content at a frequency of at least one (1) test for every 2,500 square feet of compacted fill in the structure areas and 5,000 square feet in pavement areas. One density and water content test shall be performed for each 1-foot of backfill, for every 250 linear feet of compacted utility trench backfill.</p> <ul style="list-style-type: none">▪ Seismic design shall be designed in accordance with 2016 CBC guidelines and recommendations provided in the		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>seismic design parameters table on pages 15-16 in Technical Appendix D.</p> <ul style="list-style-type: none">Shallow foundation of the Project site shall be designed in accordance with 2016 CBC guidelines and recommendations provided in the shallow foundation design parameters table on page 19 in Technical Appendix D. <p>The base of all foundation excavations shall be free of water and loose soil, prior to placing concrete. Concrete shall be placed soon after excavating to reduce bearing soil disturbance. Care shall be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations shall be removed/reconditioned before foundation concrete is placed. Over-excavation for structure fill placement below footings shall be conducted as shown on page 20 in Technical Appendix D.</p> <ul style="list-style-type: none">Structures with unbalanced backfill levels on opposite sides shall be designed for earth pressures at least equal to values indicated in the lateral earth pressure design parameters table on page 21 in Technical Appendix D. <p>Backfill placed against structures shall consist of granular soils or low plasticity cohesive soils. Granular backfill must extend out and up from the base of the wall at an angle of at least 45 and 60 degrees from vertical for the active and passive cases, respectively.</p> <p>Backfill behind retaining walls shall consist of a soil of sufficient granularity that the backfill will properly drain. Surface drainage shall be provided to prevent ponding of</p>		



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		<p>water behind walls. A drainage system consisting of either or both of the following shall be installed behind all retaining walls: a 4-inch diameter perforated PVC (Schedule 40) pipe or equivalent at the base of the stem encased in 2 cubic feet of granular drain material per linear foot of pipe or synthetic drains such as Enkadrain, Miradrain, Hydroway 300 or equivalent. Perforations in the PVS shall be 3/8 inch in diameter and shall be placed facing down. Granular drain material shall be wrapped with filter cloth to prevent clogging of the drains with fines. Walls shall be waterproofed to prevent nuisance seepage and damage.</p> <ul style="list-style-type: none">▪ Floor slabs shall bear on compacted fills or competent native soils. For slabs bearing on compacted fill, the top 12 inches of soil shall be compacted to 95 percent relative compaction. Finish-graded surfaces shall be rolled to provide smooth and dense surfaces. Slabs to receive moisture-sensitive coverings shall be provided with a vapor retarder/barrier. The vapor retarder/barrier shall be designed and constructed according to the American Concrete Institute 302.1R, Concrete Floor and Slab Construction, which addresses moisture vapor retarder/barrier construction. At a minimum, the vapor retarder/barrier shall comply with ASTM E1745 and have a nominal thickness of at least 10 mils. The vapor retarder/barrier shall be properly sealed, per the manufacturer's recommendations, and protected from punctures and other damage. The vapor barrier shall be placed directly on the compacted soil with a minimum 4-inch thick layer of dry sand on top of the vapor barrier.▪ Presented on page 24 in Technical Appendix D are preliminary pavement sections for a range of traffic indices and an assumed Resistance-Value (R-Value) of 37 and 32 for		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>asphalt concrete (AC) pavement. R-Value testing of the subgrade soils shall be performed during precise grading operations to verify the actual R-Value. The project Civil Engineer or Traffic Engineer shall select traffic indices that are appropriate for the anticipated pavement usage and level of maintenance desired through the pavement life. Final pavement structural sections will be dependent on the R-value of the subgrade materials and the traffic index for the specific street or area being addressed. The pavement sections are subject to the review and approval of the County of Riverside. Pavement subgrade soils shall be at or near optimum moisture content and shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D1557 and should conform with the specification listed in Section 26 of the Standard Specifications for the State of California Department of Transportation (Caltrans) or Section 200-2 of the Standard Specifications for Public Works Construction (Green Book). The AC shall conform to Section 26 of the Caltrans Standard Specifications or Section 203-6 of the Green Book.</p> <ul style="list-style-type: none">▪ Pavements shall be sloped to provide rapid drainage of surface water. The pavement subgrade shall be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet shall be provided to remove water from the granular subbase.▪ The geotechnical engineer shall provide preventive maintenance to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing).		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<ul style="list-style-type: none">▪ The geotechnical engineer shall provide the following recommendations in the design and layout of pavements:<ul style="list-style-type: none">o Final grade adjacent to paved areas shall slope down from the edges at a minimum 2 percent.o Subgrade and pavement surfaces shall have a minimum 2 percent slope to promote proper surface drainage.o Install below pavement drainage systems surrounding areas anticipated for frequent wetting.o Install joint sealant and seal cracks immediately.o Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.o Place compacted, low permeability backfill against the exterior side of curb and gutter.o Place curb, gutter, and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials. <p>CRDR 4.5-1 The Project is required to comply with the provisions of City Municipal Code Chapters 15.02 and 15.04, which incorporate the 2016 California Building Standards Code (California Code of Regulations, Title 24).</p> <p>CRDR 4.5-2 The Project shall comply with all applicable provisions of Chapter 14.08 of the City of Lake Elsinore Municipal Code related to stormwater runoff.</p> <p>CRDR 4.5-3 The Project is required to comply with the provisions of SCAQMD Rule 403 by addressing blowing dust from the Project's construction activities.</p>	<p>Project Applicant/ Building & Safety Division</p> <p>Project Applicant/ Building & Safety and Engineering Divisions</p> <p>Project Applicant, Project Grading Contractor/ Engineering Division,</p>	<p>Prior to issuance of building permits</p> <p>During grading and construction activities and long-term operation</p> <p>During grading and construction activities</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		CRDR 4.5-4 The Project is required to comply with the provisions of the Project's National Pollution Discharge Elimination System (NPDES) permit, and the Project's Storm Water Pollution Prevention Plan (SWPPP). Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges.	SCAQMD Project Applicant, Project Grading Contractor/ Engineering Division, RWQCB	During grading and construction activities and long-term operation
4.6 Greenhouse Gas Emissions				
Threshold a): The proposed Project would be consistent with or otherwise would not conflict with the Lake Elsinore CAP, which demonstrates that City-wide GHG emissions would be reduced to 1990 levels by 2020 and 33% below 1990 emission levels by 2030. With mitigation, regulatory requirements, and Project design features, the Project would achieve an additional reduction of approximately 15% beyond the CAP requirements, which would satisfy the additional 7% needed to meet the SB 32 reduction target. Because the Project is consistent with the City's CAP and would demonstrate an additional 15% reduction through implementation of mitigation, regulatory requirements, and Project design features by 2030, the Project would be consistent with the statewide reduction targets for GHG emissions as established by SB 32. Therefore, with regulatory requirements, Project design features, and mitigation measures, the Project's GHG emissions would be consistent with the state's GHG reduction targets and impacts would be reduced to less-than-significant levels.	Less than Significant with Mitigation	MM 4.6-1 Prior to the issuance of building permits, the City of Lake Elsinore shall review the building plans to ensure that the following requirements have been or will be met: <ul style="list-style-type: none"> The Project Applicant shall provide evidence that the buildings have been designed to achieve efficiency exceeding current 2016 California Building Code Title 24 requirements by at least 15 percent for both residential and non-residential uses. All primary use buildings and structures shall be designed to accommodate photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future tenant/purchasers of the existence of this infrastructure. 	Project Applicant/ Planning Division, Building & Safety Division	Prior to issuance of building permits
Threshold b): The Project would be fully consistent with the City of Lake Elsinore CAP, and therefore would be consistent	Less than Significant with	<ul style="list-style-type: none"> To reduce water demands and associated energy use, a Water Conservation Strategy shall be implemented that 		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
with the GHG reduction targets established by AB 32. Additionally, the Project would not conflict with the CARB Scoping Plan. Furthermore, with implementation of regulatory requirements, Project design features, and mitigation measures, the Project would exceed the GHG reduction target established by SB 32 to reduce emissions to 40% below 1990 levels by 2030. Accordingly, Project impacts due to a conflict with a plan, policy, or regulation adopted to reduce GHG emissions would be reduced to less-than-significant levels.	Mitigation	<p>demonstrates a minimum 20% reduction in outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Future building permit applications shall incorporate the following:</p> <ul style="list-style-type: none">○ The landscaping palette shall emphasize drought-tolerant plants consistent with provisions of the City of Lake Elsinore requirements;○ Irrigation plans shall demonstrate use of water-efficient irrigation techniques consistent with City of Lake Elsinore requirements. <p>▪ Project building plans shall incorporate the following:</p> <ul style="list-style-type: none">○ U.S. EPA Certified WaterSense labeled or equivalent faucets, high-efficiency toilets HETs), and water-conserving shower heads.○ All appliances shall be energy star appliances (refrigerator, dish washer, and washing machine). <p>MM 4.6-2 Prior to the issuance of building permits, the City of Lake Elsinore shall review Project building plans to ensure that all outdoor lighting consists of solar or light-emitting diodes (LEDs), where feasible. Use of any other type of lighting, if required for operational or safety reasons, shall be minimized to the extent feasible.</p> <p>MM 4.6-3 Prior to issuance of occupancy permits for any proposed commercial uses on site, the City of Lake Elsinore shall ensure that at least 10% of the required parking spaces are reserved for fuel-efficient vehicles (i.e., vehicles bearing Clean Air Vehicle stickers from expired High Occupancy Vehicle lane programs.</p> <p>MM 4.6-4 Prior to the issuance of occupancy permits for any</p>	<p>Project Applicant/ Building & Safety Division</p> <p>Project Applicant/ Building & Safety Division</p> <p>Project</p>	<p>Prior to issuance of building permits</p> <p>Prior to issuance of occupancy permits for any proposed commercial uses on site</p> <p>Prior to the</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		proposed commercial uses on site, the Project Applicant shall prepare a Commute Trip Reduction Program that requires 20% of employees to be offered telecommuting or other trip reduction techniques, consistent with Measure T-4.1 of the Lake Elsinore Climate Action Plan (CAP). The Commute Trip Reduction Program also shall require future tenants to provide information, training, and incentives to future employees to encourage participation.	Applicant/ Building & Safety Division, Planning Division	issuance of occupancy permits for any proposed commercial uses on site
		CRDR 4.6-1 The Project complies with all applicable provisions of the City of Lake Elsinore Climate Action Plan (December 13, 2011), including applicable requirements identified in Table 4.10-5 of the Project's EIR.	Project Applicant/ Building & Safety Division, Planning Division	Prior to issuance of building permits
		CRDR 4.6-2 The Project is designed to provide pedestrian connections along selected roads and trails within the development to provide access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.	Project Applicant/ Planning Division	Prior to Specific Plan approval and prior to issuance of occupancy permits
		CRDR 4.6-3 The Project is designed to accommodate a mix of uses (i.e., residential, commercial, and recreational land uses) which would serve to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips. The Project would minimize the need for external trips by including services/facilities for uses such as day care, banking/ATM, restaurants, vehicle refueling, health care, personal services (e.g., salons, dry cleaning, etc.) and/or shopping uses.	Project Applicant/ Planning Division	Prior to Specific Plan approval and prior to issuance of building permits
		CRDR 4.6-4 The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development.	Project Applicant/ Building & Safety	Prior to building permit issuance



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>CRDR 4.6-5 The Project is required to comply with applicable provisions of the 2016 California Green Building Standards Code (or any updated code that may be in existence at the time of issuance of building permits), as implemented by the City's Municipal Code. These requirements include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ Prior to issuance of occupancy permits, the City of Lake Elsinore shall ensure that commercial uses on site accommodate the required number of Electric Vehicle (EV) charging stations as required by the 2016 Green Building Standards Code Section 5.106.5.3 (Electric vehicle (EV) charging). ▪ Prior to issuance of grading, demolition, or building permits, the Project Applicant shall prepare, and the City of Lake Elsinore shall review and approve, a Construction Waste Management Plan, in conformance with the 2016 Green Building Standards Code Section 5.408 (Construction Waste Reduction, Disposal and Recycling). The Construction Waste Management Plan shall demonstrate that a minimum of 65 percent of the nonhazardous construction and demolition waste will be recycled and/or salvaged, except as otherwise allowed by Section 5.408. 	<p>Division, SCAQMD</p> <p>Project Applicant/ Building & Safety Division</p> <p>Project Applicant/ Building & Safety Division</p>	<p>Prior to issuance of occupancy permits for proposed commercial uses</p> <p>Prior to issuance of grading, demolition, or building permits</p>
4.7 Hazards and Hazardous Materials				
Threshold a): Under existing conditions, no hazards were found on the Project site. During Project construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project as proposed would not create a significant hazard to the public or environment through the routine transport, use, or disposal	Less than Significant	CRDR 4.7-1 The Project shall comply with California Health and Safety Code § 25507, which requires a Hazardous Materials Business Emergency Plan (HMBEP). The HMBEP requires the disclosure of the inventory of hazardous materials and provides procedures to follow in the event of an emergency situation (such as a fire or hazardous spill). Oversight for this plan is provided by	Project Applicant/ Riverside County Department of Environmental Health (RCDEH)	Prior to issuance of occupancy permits for uses subject to California Health & Safety Code



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
of hazardous materials.				§ 25507
Threshold b): Under existing conditions, no hazards were found on the Project site. During Project construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project as proposed would not create a significant hazard to the public or the environment through accident conditions involving the release of hazardous materials. Thus, the Project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials in the environment.	Less than Significant	the Riverside County Department of Environmental Health (RCDEH) and would be revised annually and renewed every three years. CRDR 4.7-2 The Project shall comply with Section 2540.7, Gasoline Dispensing and Service Stations, of the California Occupational Safety and Health Regulations.	Project Applicant/ RCDEH	Prior to issuance of occupancy permits for the gas station and during long-term operation of the gas station
Threshold c): The Project site is located immediately adjacent to the Temescal Canyon High School. The only component of the Project that would have the potential to emit hazardous emissions or handle hazardous materials on-site would be the proposed gas station. The proposed gas station would handle hazardous materials within one-quarter mile of a school; however, the gas station's hazardous emissions would be below the cancer-related hazardous risk threshold established by SCAQMD and would be subject to regulatory requirements and routine inspections. The remaining proposed uses for the Project site are not associated with the transport, use, or disposal of significant quantities of hazardous materials. Thus, the Project's impact due to emitting hazardous emissions or handle hazardous materials within one-quarter mile of an existing or proposed school would be less than significant.	Less than Significant	CRDR 4.7-3 The Project shall comply with Chapter 38, Liquefied Petroleum Gases, of the California Fire Code and the RCDEH. CRDR 4.7-4 The Project shall comply with Title 22, Division 4.5 of the California Code of Regulations, which requires residents and employees to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility.	Project Applicant/ RCDEH	Prior to issuance of occupancy permits for the gas station and during long-term operation of the gas station
Threshold d): The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Accordingly, no impact would occur.	No Impact	CRDR 4.7-5 The Project shall comply with Title 22, Division 4.5, Chapter 11 of the California Code of Regulations which requires fluorescent lamps, batteries, and mercury thermostats be recycled or taken to a Household Hazardous Waste Collection Facility.	Project Applicant/ Riverside County Department of Waste Resources (RCDWR)	During long-term operation of the Project



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>Threshold e): The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest public airport is the March Air Reserve Base, located approximately 12 miles northeast of the Project site, and the Project is not located within the AIA of the March Air Reserve Base. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project site. The Project is not within the AIA for Skylark Field. As such, the proposed Project would not expose people residing or working in the area to safety hazards associated with public airports, and impacts would be less than significant.</p>	Less than Significant	<p>CRDR 4.7-6 The Project shall comply with the requirements of the Nichols Ranch Specific Plan. Compliance with the Nichols Ranch Specific Plan standards include but are not limited to improvements to surrounding roadway, compliance with standards related to fuel modification zones, maintenance of fuel modification zones, landscape, and fire protection features which would be assured by the City's future review of implementing building permits for compliance with the Nichols Ranch Specific Plan.</p>	Project Applicant/ Planning Division, Building & Safety Division, Engineering Division	Prior to issuance of building and/or occupancy permits
<p>Threshold f): The Project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route and the Project would be required to maintain access during construction. Thus, impacts would be less than significant.</p>	Less than Significant	<p>CRDR 4.7-7 In conformance with the requirements of the Nichols Ranch Specific Plan, and as a component of future building permit applications, the Building Official (or his/her designee) shall verify that all of the recommendations given in the Project's Fire Protection Plan (Technical Appendix G) with respect to fuel management zones have been incorporated into the building permit application(s). The fuel management zones shall consist of following zones, as conceptually depicted on Figure II-10, of the Nichols Ranch Specific Plan:</p> <ul style="list-style-type: none"> Zone 1: Zone 1 would consist of a 10-foot setback between buildings and trees. Zone 1 would generally be located within the rear yard and side yards of the homes within residential Planning Areas that are in close proximity to Stovepipe Creek. Zone 2: Zone 2 would consist of landscaping and manufactured slopes that would be irrigated and fire resistant. Zone 2 would generally be located in the landscaping areas outside of homeowner lots, starting from the lot parcel line extending outwards, parks, roadway landscaping, and manufactured slopes. Zone 3: Zone 3 would consist of thinning treatment to ensure that areas are free of any dead and dying combustible vegetation. Zone 3 would generally be located 	Project Applicant/ Planning Division, Building & Safety Division, Fire Department	Prior to issuance of building permits
<p>Thresholds g) and h): According to the City of Lake Elsinore General Plan Update EIR, the Project site is identified as having a "High" and "Very High" susceptibility to wildfires. Nichols Road, El Toro Road, Wood Mesa Court, and I-15 would provide buffers around the Project site. A buffer distance of between 30-60 feet as provided by these roads and buffer as provided by I-15 would reduce the site's potential for fire hazards. In addition, the Project would be subject to mandatory compliance with the recommendations of the FPP as required by the Nichols Ranch Specific Plan, which requires implementation of fuel modification zones and other fire hazard design features on the Project site.</p>	Less than Significant			



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
Furthermore, the Project site would be developed in a manner consistent with jurisdictional requirements for fire protection and would generally decrease the fire hazard in the local area. As such, impacts regarding wildland fires would be less than significant.		<p>within the detention basins and manufactured slopes within Planning Area 13.</p> <ul style="list-style-type: none">Special Fire Protection Features: Special Fire Protection Features would be required for a few homes within residential Planning Areas 1, 2, and 5 because they do not meet the minimum 100-foot fuel treatment setback. For any home or building that is located less than 100 feet from Stovepipe Creek or the natural open space located north of Planning Area 2 and Nichols Road, a 6-foot tall wall would be required to limit any actual radiant fire that may start in the creek or open space areas. No combustible landscaping would be allowed within five feet of the structure and no trees would be allowed on these residential lots. Additional construction standards would be required for these homes as described in the FPP. <p>CRDR 4.7-8 As a component of future building permit applications, the Building Official (or his/her designee) shall verify that all of the recommendations given in the Project's Fire Protection Plan (Technical Appendix G) with respect to construction requirements have been incorporated into the building permit application(s). The construction requirements include the following:</p> <ul style="list-style-type: none">For areas with less than 100 feet of overall fuel treatment the following building enhancements will be required. Refer to Section 2.4 of the FPP for detailed specific flame lengths for these areas:<ul style="list-style-type: none">For all surfaces facing open space, during the construction process these lots shall be constructed with an underlay of exterior gypsum sheathing 5/8-inch thickness. The product shall be Type X for use in a fire rated wall assembly. Stucco shall be applied over the gypsum wall assembly.	Project Applicant/ Building & Safety Division, Fire Department	Prior to issuance of building permits



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<ul style="list-style-type: none">○ Appendages and projections attached to exterior fire-resistive walls, shall be constructed to maintain the same fire-resistant standards as the exterior walls of the structure.○ If the roof profile allows a space between the roof covering and roof decking, the roof area will have one layer of minimum 72-pound (32.4 kg) mineral-surfaced, non-perforated cap sheet complying with ASTM D 3909 installed over the combustible decking.○ Fire sprinklers shall be installed in the attics. Fire sprinklers will require a four head calculation for the sprinkler design. The four-head calculation must have a minimum .05 density design, QR and intermediate temperature heads; the heads may be of a small orifice type such as 3/8 or 7 /16. Listed domestic demand shutoff valves may be used to try to minimize upgrading meter sizes where possible.○ Copper piping is required in the attics; chlorinated polyvinyl chloride (CPVC) will only be permitted in the attic if listed heads are used to protect piping in accordance with their listing. Lots shall have a 6-foot masonry fire wall, which may have up to 3 feet of rated glass to provide for a view. This will block the defensible space area around the home from the creek area.○ Lots 14, 15, 16, 23 and 24 within five (5) feet of the structure envelope no combustible landscaping will be allowed, no trees will be allowed on the parcel. The exception will be the front of the structure facing the access.○ Lot 14, 15, 16, 23 and 24 have the greatest exposure to an off-shore wind driven fire and shall have two (2) sprinkler heads extended to the under-eave area. The heads should be installed at equal distance on eave		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>areas facing open space. This will protect the structure envelope in future years against burning combustible material near and around structure envelope.</p> <ul style="list-style-type: none">▪ All structures within the development site shall meet all wildland/interface standards to the satisfaction of the Riverside County Fire Department (RCFD). Design and construction shall meet the requirements listed in the 2016 Edition of the Fire and Building Codes, with special adherence to Chapter 7A, and the 2016 Edition of the California Residential Code section R337, with other local amendments/ordnances adopted by RVCFD. Other applicable codes include the 2013 International Wildland-Urban Interface Code (IWUIC). For a description of the current construction requirements as of the date of this report (see Appendix E of EIR Technical Appendix G).▪ All accessory structures such as decks, balconies, patios, covers, gazebos and fences shall be built from non-combustible or ignition resistant materials. The homeowner(s) are not restricted from having concrete patios, concrete walkways or swimming pools within the Vegetation Management Zones in compliance with other codes. Refer to Appendix D of EIR Technical Appendix G for photos and descriptions of non-combustible decks, patio covers, and railings for these accessory structures. Construction or building permits shall not be issued until the fire code official inspects and approves required vegetation clearance, fire apparatus access and water supply for the construction site. The issuance of building permits with regard to these requirements shall be in accordance with RVCFD. Prior to the delivery of combustible building construction materials to the project site the following conditions shall be completed to the satisfaction of the RVCFD:		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<ul style="list-style-type: none">▪ All wet and dry utilities shall be installed and approved by the appropriate inspecting department or agency.▪ Clearance of Zone 1, 2 and 3 vegetation management shall be provided prior to combustible material arriving on the site and shall be maintained throughout the duration of construction. Fire code officials may require additional vegetation management and/or defensible space when warranted.▪ Additional requirements as listed in the development will be adhere to:<ul style="list-style-type: none">○ Mobile stationary or portable powered operated equipment in the HFA shall not be used without the RVCFD written approval. Specific fire protection measures that may be required to mitigate the hazard include, but are not limited to:<ul style="list-style-type: none">▪ A standby water tender, equipped with a pump, fire hose and nozzle.▪ Pre-wetting of the site to avoid the production of sparks between blades, tracks and rocks.▪ Conducting a fire watch for a minimum of one-hour following the cessation of operations each day▪ For welding cutting or grinding work, clear away all combustible material from the area around such operations for a minimum distance of 10 feet. A hot-work permit may be required prior to commencing work.▪ Maintain a serviceable round point shovel with an overall length of not less than forty-six (46) inches and a five (5) gallon backpack water pump-type fire extinguisher fully equipped and ready for use at the immediate area during the operation.▪ All homes will require NFPA 13D Residential Sprinklers, engineered to the satisfaction of RVCFD. Those lot listed in		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Section 5, requiring special mitigation measures shall have under eave sprinklers on the exterior of the structure.</p> <ul style="list-style-type: none"> Fire access roads shall meet the requirements of the RVCFD, and shall be a paved surface capable of supporting loads of 80,000 lbs gross vehicle weight. Access to all portions of the building must be within 150 feet of the available fire department access. Fire access roads shall be maintained for clear access of emergency vehicles. The proposed development requires primary and secondary access at the time of construction. Any gates to be installed shall meet RVCFD Standards and shall be approved by RVCFD prior to fabrication and installation. A 'Knox' override key switch must be installed outside the gate in an approved, readily visible, and unobstructed location at or near the gate to provide emergency access. 		
4.8 Historic and Archaeological Resources				
<p>Threshold a): Implementation of the Project would impact historical resources on the Project site that may be uncovered during grading activities. Compliance with the Applicable City Regulations and Design Requirements, as well as Mitigation Measures MM 4.8-1 through MM 4.8-7, would ensure that a qualified Project Archaeologist and Tribal Monitors present on-site during ground-disturbing activities and would ensure that any archaeological resources that may be uncovered are appropriately treated as recommended by the Project Archaeologist in consultation with the Tribal Monitors.</p> <p>Threshold b): Implementation of the Project would impact archaeological resources on the Project site that may be uncovered during grading activities. Compliance with the Applicable City Regulations and Design Requirements, as well as Mitigation Measures MM 4.8-1 through MM 4.8-7 would ensure that a qualified Project Archaeologist and Tribal</p>	<p>Less than Significant with Mitigation</p> <p>Less than Significant with Mitigation</p>	<p>MM 4.8-1 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:</p> <ol style="list-style-type: none"> All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted until a meeting is convened between the developer, the Project Archaeologist, the Native American tribal representative(s) from consulting tribes (or other appropriate ethnic/cultural group representative), and the Community Development Director or their designee to discuss the significance of the find. The developer shall call the Community Development Director or their designee immediately upon discovery of the cultural resource to convene the meeting. At the meeting with the aforementioned parties, the 	Project Applicant, Project Grading Contractor, Project Archaeologist/ Planning Division, Tribal Monitor(s)	During grading activities



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>Monitors are present on-site during ground disturbing activities and would ensure that any archaeological resources that may be uncovered are appropriately treated as recommended by the Project Archaeologist in consultation with the Tribal Monitors.</p> <p>Threshold c): The Project site does not contain a cemetery and no known cemeteries are located within the immediate site vicinity. In the unlikely event that human remains are discovered during Project grading or other ground-disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains. Nonetheless, Mitigation Measure MM 4.8-6 has been imposed on the Project to ensure compliance with California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq.</p>	Less than Significant	<p>significance of the discoveries shall be discussed and a decision is to be made, with the concurrence of the Community Development Director or their designee, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resource.</p> <p>4. Further ground disturbance shall not resume within the area of the discovery until a meeting has been convened with the aforementioned parties and a decision is made, with the concurrence of the Community Development Director or their designee, as to the appropriate mitigation measures.</p> <p>MM 4.8-2 Archaeologist/CRMP. Prior to issuance of grading permits, the applicant/developer shall provide evidence to the Community Development Department that a Secretary of Interior Standards qualified and certified Registered Professional Archaeologist (RPA) has been contracted to implement a Cultural Resource Monitoring Program (CRMP) that addresses the details of all activities that must be completed and procedures that must be followed regarding cultural resources associated with this project. The CRMP document shall be provided to the Community Development Director or their designee for review and approval prior to issuance of the grading permit. The CRMP provides procedures to be followed and are to ensure that impacts on cultural resources will not occur without procedures that would reduce the impacts to less than significant. These measures shall include, but shall not be limited to, the following:</p> <p>o Archaeological Monitor: An adequate number of qualified 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</p>	Project Applicant, Project Archaeologist/ Planning Division, Tribal Monitor(s)	Prior to issuance of a grading permit, during grading activities, and prior to grading final



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>location of inspections will be determined by the Project Archaeologist, in consultation with the Tribal monitor.</p> <ul style="list-style-type: none">o <u>Cultural Sensitivity Training</u>: The Project Archaeologist and a representative designated by the consulting Tribe(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all Construction Personnel. Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event unanticipated cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. This is a mandatory training and all construction personnel must attend prior to beginning work on the project site. A sign-in sheet for attendees of this training shall be included in the Phase IV Monitoring Report.o <u>Unanticipated Resources</u>: In the event that previously unidentified potentially significant cultural resources are discovered, the Archaeological and/or Tribal Monitor(s) shall have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The Project Archaeologist, in consultation with the Tribal monitor(s) shall determine the significance of the discovered resources. The Community Development Director or their designee must concur with the evaluation before construction activities will be allowed to resume in the affected area. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods.		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>o <u>Cultural Resources Disposition</u>: In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:</p> <p>One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the Community Development Department:</p> <ol style="list-style-type: none">1. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.2. Relocation of the resources on the Project property. The measures for relocation shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts by means of a deed restriction or other form of protection (e.g., conservation easement) in order to demonstrate avoidance in perpetuity. <p>Relocation shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to</p>		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Public Records Request.</p> <p>3. If relocation is not agreed upon by the Consulting Tribes then the resources shall be curated at a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.</p> <p>o <u>Phase IV Report</u>: A final archaeological report shall be prepared by the Project archaeologist and submitted to the Community Development Director or their designee prior to grading final. The report shall follow County of Riverside requirements and shall include at a minimum: a discussion of the monitoring methods and techniques used; the results of the monitoring program including any artifacts recovered; an inventory of any resources recovered; updated DPR forms for all sites affected by the development; final disposition of the resources including GPS data; artifact catalog and any additional recommendations. A final copy shall be submitted to the City, Project Applicant, the Eastern Information Center</p>		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>(EIC), and the Tribe.</p> <p>MM 4.8-3 Cultural Resources Disposition: In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:</p> <p>One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the Community Development Department:</p> <p>a) Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.</p> <p>b) Relocation of the resources on the Project property. The measures for relocation shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts by means of a deed restriction or other form of protection (e.g., conservation easement) in order to demonstrate avoidance in perpetuity.</p> <p>Relocation shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.</p> <p>c) If relocation is not agreed upon by the Consulting Tribes then</p>	Project Applicant, Project Archaeologist/ Planning Division, Tribal Monitor(s)	If inadvertent discoveries occur during the course of grading



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>the resources shall be curated at a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.</p> <p>MM 4.8-4 Tribal Monitoring. Prior to the issuance of a grading permit, the applicant shall contact the consulting Native American Tribe(s) that have requested monitoring through consultation with the City during the AB 52 and/or the SB 18 process ("Monitoring Tribes"). The applicant shall coordinate with the Tribe(s) to develop individual Tribal Monitoring Agreement(s). A copy of the signed agreement(s) shall be provided to the City of Lake Elsinore Community Development Department, Planning Division prior to the issuance of a grading permit. The Agreement shall address the treatment of any known tribal cultural resources (TCRs) including the project's approved mitigation measures and conditions of approval; the designation, responsibilities, and participation of professional Tribal Monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains/burial goods discovered on the site per the Tribe(s) customs and traditions and the City's mitigation measures/conditions of approval. The Tribal</p>	<p>Project Applicant, Project Archaeologist/ Planning Division, Monitoring Tribes</p>	<p>Prior to the issuance of grading permits and during grading activities</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Monitor will have the authority to stop and redirect grading in the immediate area of a find in order to evaluate the find and determine the appropriate next steps, in consultation with the Project Archaeologist.</p> <p>MM 4.8-5 Phase IV Report. Upon completion of the implementation phase, 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 County 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.</p> <p>MM 4.8-6 Discovery of Human Remains. In the event that human remains (or remains that may be human) are discovered at the project site during grading or earthmoving, the construction contractors, project archaeologist and/or designated Native American Monitor shall immediately stop all activities within 100 feet of the find. The project applicant shall then inform the Riverside County Coroner and the City of Lake Elsinore Community Development Department immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains and that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. If human remains are determined to be Native American, the applicant shall comply with the state law relating to the disposition of Native American burials that fall</p>	<p>Project Applicant, Project Archaeologist/ Planning Division, Monitoring Tribes</p> <p>Project Applicant, Project Archaeologist/ Planning Division, Tribal Monitor(s)</p>	<p>Following completion of the implementation phase</p> <p>During grading and ground-disturbing activities</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>within the jurisdiction of the NAHC (PRC Section 5097). The coroner shall contact the NAHC within 24 hours and the NAHC will make the determination of most likely descendant(s). The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. In the event that the applicant and the MLD are in disagreement regarding the disposition of the remains. State law will apply and the mediation process will occur with the NAHC, if requested (see PRC Section 5097.98(e) and 5097.94(k)).</p> <p>According to the California Health and Safety Code, six or more human burial at one location constitutes a cemetery (Section 81 00), and disturbance of Native American cemeteries is a felony (Section 7052).</p> <p>MM 4.8-7 Non-Disclosure of Reburial Location. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254(r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).</p>	Project Applicant, Project Archaeologist/ Planning Division, Tribal Monitor(s)	During grading and ground-disturbing activities and throughout the life of the Project
4.9 Hydrology and Water Quality				
Threshold a): With implementation of the BMPs from the SWPPP and the Project-specific WQMP, included as an applicable City Regulation below, as well as implementation of the Project's drainage plan that includes two (2) drainage basins, included as an applicable City Regulation below, the Project would result in less-than-significant impacts with respect to water quality.	Less than Significant	CRDR 4.9-1 The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's SWPPP. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges.	Project Applicant, Project Construction Manager/ Building & Safety Division, Engineering	During grading and construction activities



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>Threshold b): The Project has a reliable source of domestic water and does not propose any new potable water wells that would directly extract groundwater. Groundwater recharge would occur in on-site drainage basins and landscaped areas, and water conveyed off-site would have the ability to percolate into the groundwater table. The Project would not 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, and the impact would be less than significant.</p>	Less than Significant	<p>CRDR 4.9-2 The Project shall be required to comply with the provisions of the Project's Drainage Study and the provisions of the proposed Specific Plan No. 2018-01. Compliance with these provisions would be assured by the City's future review of the Final Map and implementing grading and building permits for compliance with the provisions that require the development of two (2) drainage basins in order to properly attenuate Project-related drainage flows. These provisions would serve to reduce and/or avoid impacts related to hydrology and water quality.</p>	Division Project Applicant/ Building & Safety Division, Engineering Division	Prior to Final Map and prior to building or grading permit issuance
<p>Threshold c): Implementation of the BMPs from the Project-specific SWPPP and the on-site drainage basins, included as applicable City Regulations, would ensure that construction and operation of the Project would not result in substantial erosion or siltation on- or off-site or contribute runoff storm water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Accordingly, the Project's impacts with respect to Thresholds c and e would be less than significant.</p>	Less than Significant	<p>CRDR 4.9-3 The Project was reviewed for compliance with General Plan Policy 5.1 and Implementation Program through the preparation of the Project's WQMP. The Project was found to be consistent with General Plan Policy 5.1 and Implementation Program as stated below.</p> <ul style="list-style-type: none"> Policy 5.1: Continue to ensure that new construction in floodways and floodplains conforms to all applicable provisions of the National Flood Insurance Program in order to protect buildings and property from flooding. Implementation Program: Through the project review and the CEQA processes the City shall assess new development and reuse applications for potential flood hazards, and shall require compliance with FEMA Special Flood Hazard Areas where appropriate. 	Project Applicant/ Building & Safety Division, Engineering Division	Prior to Project approval
<p>With implementation of the Project's proposed drainage plan (including the two [2] proposed drainage basins) included as an applicable City Regulation, the Project would result in the reduction of peak storm water discharge flows compared to existing conditions. Because the proposed Project has been designed to attenuate post-development runoff from the site, Project-related runoff would not substantially increase the rate or amount of surface runoff in downstream areas in a manner that would result in flooding on- or off-site. A less-than-significant impact would occur.</p>		<p>CRDR 4.9-4 The Project shall comply with EIR Mitigation Measure MM 4.4-1, which is presented in EIR Subsection 4.4, Geology and Soils, and incorporates all of the requirements listed in the Project's Geotechnical Evaluation (EIR Technical Appendix D).</p>	As specified above for Mitigation Measure MM 4.4-1	As specified above for Mitigation Measure MM 4.4-1
		<p>CRDR 4.9-5 The Project shall comply with City of Lake Elsinore</p>	Project	During grading,



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>The FEMA FIRM for the Project site indicates that the majority of the Project site is not located within a special flood hazard area, except for Stovepipe Creek which is located within a special flood hazard area. The Project proposes minor modifications to the flood plain limits and the Project Applicant would be required to obtain a CLOMR and LOMR from FEMA to modify the mapped floodplain boundaries. Following the modification of the floodplain boundaries on-site, no development would occur within the revised flood zones. Thus, with implementation of regulatory requirements the Project would not place housing or structures within a 100-year flood hazard area and would not impede or redirect flood flows. Accordingly, the Project's potential to contribute to an impact associated with placing housing or structures within a 100-year flood zone would be less than significant.</p> <p>Threshold d): Development as proposed by the Project would not occur within any areas that are mapped by FEMA as occurring within a floodplain. As such, the Project would not result in the release of pollutants due to Project inundation. The Project site is located approximately 1.7 miles north of a levee associated with Lake Elsinore, and 4.7 miles northwest of the Railroad Canyon Dam. According to the City of Lake Elsinore General Plan EIR, the Project site is located outside of dam inundation zones. Furthermore, compliance with the City of Lake Elsinore General Plan "Policy and Implementation Plan" applicable to dam inundation included as an applicable City Regulation as well as the construction of the two (2) drainage basins on-site included as an applicable City Regulation would ensure that the Project does not result in the release of pollutants due to any potential dam inundation hazards associated with future development, and impacts</p>	Less than Significant	<p>Municipal Code Chapter 14.08, Stormwater/Urban Runoff Management and Discharge Controls, which intends to protect and enhance the water quality of City watercourses, water bodies, groundwater, and wetlands.</p> <p>CRDR 4.9-6 The Project shall comply with City of Lake Elsinore Municipal Code Chapter 15.64, Flood Damage Prevention, which includes flood construction requirements to minimize flood hazards.</p> <p>CRDR 4.9-7 Prior to issuance of grading permits, the Project Applicant shall obtain a Conditional Letter of Map Revision (CLOMR) from FEMA to modify the floodplain boundaries as shown in FEMA FIRM No. 06065C2928G, dated August 28, 2008. Prior to issuance of building permits, the Project Applicant shall obtain a Letter of Map Revision (LOMR) to reflect the modified flood plain limits resulting from Project implementation.</p>	<p>Applicant/ Engineering Division</p> <p>Project Applicant/ Building & Safety Division</p> <p>Project Applicant/ Building & Safety Division, Engineering Division FEMA</p>	<p>construction, and long-term operational activities</p> <p>Prior to Project approval and prior to grading permit issuance</p> <p>Prior to issuance of grading permits</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>would be less than significant. Based on the 1.8-mile distance and change in topography between Lake Elsinore (the nearest large body of water) and the Project site, the Project would not be subject to inundation by seiches associated with the body of water. Impacts associated with inundation by seiche would be less than significant. Additionally, due to the approximately 25-mile distance of the Project site from the Pacific Ocean, there is no potential for a tsunami to affect the Project site, and no impact would occur.</p> <p>Threshold e): The proposed Project would require an NPDES Permit, issuance of a WDR by the RWQCB, and Water Quality Certification, which would ensure the Project does not conflict with the Basin Plan. Additionally, the Project site is not located within any sustainable groundwater management plans, and the Project would not affect water quality or the amount of water discharged to local aquifers. Impacts would be less than significant.</p>	Less than Significant			
4.10 Land Use and Planning				
<p>Threshold a): The Project would not physically disrupt or divide any established communities, and no impact would occur.</p> <p>Threshold b): Although the Project would change the site's existing General Plan land use and zoning classifications, the Project would not result in a significant environmental effect due to an inconsistency with the site's existing or proposed zoning. Furthermore, the Project would be consistent with the General Plan and SCAG RTP/SCS goals. Impacts due to a conflict with the land use designations and policies of the General Plan and other planning documents would be less than significant.</p>	<p>No impact</p> <p>Less than Significant</p>	<p>CRDR 4.10-1 The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to City of Lake Elsinore Municipal Code Chapter 16.85 for the southern 27.1 acres. Fees shall be paid in compliance with Municipal Code Chapter 16.85.</p> <p>CRDR 4.10-2 The Project Applicant shall make payment of SKR HCP fees pursuant to City of Lake Elsinore Municipal Code Chapter 19.04. Fees shall be paid in compliance with Municipal Code Chapter 19.04.</p> <p>CRDR 4.10-3 To ensure compliance with the Western Riverside County MSHCP, the following shall be required:</p> <ul style="list-style-type: none"> As part of its review of implementing discretionary applications (e.g., building permits), the City of Lake Elsinore 	<p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Building & Safety Division,</p>	<p>Prior to issuance of building permits</p> <p>Prior to issuance of grading permits</p> <p>Prior to issuance of grading or building permits</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>shall assure that landscaping plans do not include the use of invasive plant species listed in Volume I, Table 6-2 of the MSHCP or in Table IV-2, Prohibited Plant List, of the Nichols Ranch Specific Plan.</p> <ul style="list-style-type: none"> Prior to approval of grading permits, the Project's construction contractor shall develop and implement a Storm Water Pollution Prevention Program (SWPPP) to address runoff and potential water quality degradation during construction. All construction plans (i.e., grading permits, building permits, etc.) shall include the following note, compliance with which shall be assured by the construction contractor: <i>"During any nighttime construction activities, all lighting shall direct lighting away from the preserved on-site drainage and associated habitat."</i> 	Engineering Division	
4.11 Noise				
<p>Threshold a): Implementation of Mitigation Measures MM 4.10-1 through MM 4.10-3 would reduce the construction noise levels at the impacted receiver locations to satisfy the 60 dBA Lmax residential and 70 dBA Lmax semi-residential significance thresholds during temporary Project construction activities. Therefore, with implementation of the required mitigation, the Project's noise impact due to Project construction would be reduced to less-than-significant levels.</p> <p>With implementation of Mitigation Measure MM 4.10-4, the future on-site exterior noise levels would range from 54.8 to 59.9 dBA CNEL at the outdoor living areas of single-family residential homes, which would ensure that the City of Lake Elsinore 60 dBA CNEL exterior noise level standards for residential land use is satisfied at all residential lots within the Project. Thus, with implementation of Mitigation Measure MM 4.10-4, Project impacts due to exterior noise levels that exceed the City's standards would be reduced to less-than-</p>	Less than Significant with Mitigation	<p>MM 4.11-1 Prior to the issuance of grading permits affecting areas on site that are located within 700 feet of the existing residential uses located east of El Toro Road/Wood Mesa Court, and prior to issuance of building permits for Phase 1 of the proposed Project, the City of Lake Elsinore shall ensure that the grading plans and building plans (as appropriate) include the following notes. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.</p> <ul style="list-style-type: none"> <i>"During construction activities that could expose nearby sensitive receptors (i.e., existing residential uses located along El Toro Road/Wood Mesa Court) to excessive construction-related noise, minimum 10-foot high temporary noise barriers shall be erected at the eastern limits of construction activities, as shown on Figure 4.10-8, Construction Noise Mitigation Measures, of the Nichols</i> 	Project Applicant/ Building & Safety Division, Engineering Division	Prior to issuance of grading permits and during Project construction activities



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>significant levels.</p> <p>With standard windows and/or glass doors with a minimum sound transmission class (STC) rating of 27 (as required by Mitigation Measure MM 4.10-5), and with construction of the noise barriers required by Mitigation Measure MM 4.10-4, the interior noise levels for Lots 35 to 60, 79 to 100, and 110 to 113 of Tentative Tract Map No. 37305 would satisfy the City of Lake Elsinore 45 dBA CNEL interior noise level standard. Therefore, with implementation of the required mitigation, impacts due to residential interior noise levels that exceed the City's standards would be reduced to less-than-significant levels.</p> <p>Hotel first through fourth floor windows would require upgraded STC ratings of 32 for all windows and/or glass doors facing I-15, as required by Mitigation Measure MM 4.10-5. The interior noise analysis shows that with the recommended interior noise mitigation measures, the Project would satisfy the City of Lake Elsinore 45dBA CNEL interior noise level standard. However, because precise building and site plans for the hotel use are not currently available, Mitigation Measure MM 4.10-6 has been imposed to require a final noise study that demonstrates that the hotel use would meet the City's interior noise standard of 45 dBA CNEL and/or that includes additional or modified mitigation to ensure the standard can be met. Accordingly, with implementation of the required mitigation, interior noise impacts associated with the proposed hotel use would be reduced to less-than-significant levels.</p> <p>Implementation of Mitigation Measure MM 4.10-7 would prohibit nighttime operation of the car wash at the proposed gas station. The mitigated Project operational noise levels</p>		<p><i>Ranch Specific Plan Environmental Impact Report (SCH No. 2018051051). Construction activities that could expose nearby sensitive receptors to excessive noise levels include any activities associated with the following construction phases that occur within the buffer distances described below:</i></p> <ul style="list-style-type: none">○ <i>Site preparation activities within 250 feet of the existing residential homes located along El Toro Road/Wood Mesa Court;</i>○ <i>Mass and fine grading activities within 700 feet of the existing residential homes located along El Toro Road/Wood Mesa Court;</i>○ <i>Building construction activities within 300 feet of the existing residential homes located along El Toro Road/Wood Mesa Court;</i>○ <i>Paving activities within 500 feet of the existing residential homes located along El Toro Road/Wood Mesa Court; and</i>○ <i>Architectural coating activities within 250 feet of the existing residential homes located along El Toro Road/Wood Mesa Court.</i> <p><i>The noise control barriers shall remain in place during any construction activities for the above-described construction phases within the buffer distance shown. The noise control barriers shall have a solid face from top to bottom. The noise control barriers must meet the minimum height and be constructed as follows:</i></p> <ul style="list-style-type: none">○ <i>The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (per the Federal Highway Administration Noise Barrier Design Handbook). The noise</i>○ <i>barriers shall be constructed using an acoustical blanket (e.g., vinyl acoustic curtains or quilted blankets)</i>		



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>would range from 25.5 to 38.6 dBA Leq without the car wash activities, which would satisfy the exterior noise level standards at all nearby sensitive receiver locations with implementation of Mitigation Measure MM 4.10-7. Therefore, the Project's operational noise levels would not exceed City standards at nearby sensitive receptors following mitigation and the Project's impacts would therefore be reduced to less-than-significant levels.</p> <p>Threshold b): Mitigation Measure MM 4.10-2 prohibits the use of construction equipment greater than or equal to 80,000 pounds within 300 feet of nearby sensitive receptor locations, and would serve to reduce the Project's vibration impacts affecting nearby sensitive receptors. Mitigated Construction Equipment Vibration Levels, the mitigated vibration levels for loaded trucks and large mobile equipment would be reduced to approximately 0.002 in/sec RMS and would be reduced below the 0.01 in/sec RMS threshold at all receiver locations. Therefore, Project construction-related vibration levels would be reduced to less-than-significant levels with implementation of Mitigation Measure MM 4.10-2.</p> <p>Threshold c): The closest airport is Skylark Field which is located approximately 5.7 miles southeast of the Project site. The Project site is not located within the AIA of the closest airport, Skylark Airport, and is not subject to substantial noise levels associated with airport operations. Further, the Project site is not located within an airport land use plan or within 2 miles of a public airport. The Project site would not be exposed to aircraft-related noise exceeding 55 dBA CNEL, which is considered "clearly acceptable" by the Riverside County ALUCP for residential and commercial development. Accordingly, the Project would not result in the exposure of</p>	<p>Less than Significant with Mitigation</p> <p>No Impact</p>	<p><i>attached to the construction site perimeter fence or equivalent temporary fence posts;</i></p> <ul style="list-style-type: none"> <i>The noise barrier must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired; and</i> <i>The noise control barrier and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.</i> <p>MM 4.11-2 Prior to the issuance of grading or building permits affecting the portions of the site located south of Stovepipe Creek, the City of Lake Elsinore shall ensure that the grading or building plans include the following note. Project contractors shall be required to ensure compliance with the note and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.</p> <ul style="list-style-type: none"> <i>During all phases of construction within on-site areas located south of Stovepipe Creek, large loaded trucks and mobile equipment greater than or equal to 80,000 pounds shall be prohibited. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used in these areas. As an exception, equipment heavier than 80,000 pounds may be utilized for the area shown on Figure 4.10-8, Construction Noise Mitigation Measures, of the Nichols Ranch Specific Plan Environmental Impact Report (SCH No. 2018051051) as being located at a distance greater than 300 feet from Sensitive Receiver Locations R1 through R6. In such a case, orange construction fencing shall be erected delineating those areas within 300 feet of Sensitive Receiver Locations</i> 	<p>Project Applicant/ Building & Safety Division, Engineering Division</p>	<p>Prior to issuance of grading permits and during all phases of construction within on-site areas located south of Stovepipe Creek</p>



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people residing or working at the Project site to excessive airport- or aircraft-related noise, and no impact would occur.		<p><i>R1 through R6 to ensure that equipment heavier than 80,000 pounds does not encroach into the required 300-foot buffer zone.</i></p> <p>MM 4.11-3 Prior to the issuance of any grading permits or building permits, the City of Lake Elsinore shall ensure that the grading plans and building plans include the following notes. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.</p> <ul style="list-style-type: none">▪ <i>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.</i>▪ <i>The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receivers nearest the Project site.</i>▪ <i>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 northwest or northern center) during all Project construction.</i>▪ <i>The construction contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.</i> <p>MM 4.11-4 Prior to the issuance of occupancy permits for Lots 35 to 60 or Lots 80 to 83 of Tentative Tract Map No. 37305, the City of Lake Elsinore shall ensure that noise-attenuation barriers have been constructed in the locations and at the heights shown on Figure 4.10-9, On-Site Traffic Noise Mitigation</p>	<p>Project Applicant, Project Construction Manager/ Building & Safety Division, Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Planning Division</p>	<p>Prior to issuance of grading or building permits and during all construction activities</p> <p>Prior to issuance of occupancy permits for Lots 35 to 60 and Lots 80 to 83 of Tentative</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Measures, of the Nichols Ranch Specific Plan Environmental Impact Report (SCH No. 2018051051). As shown on Figure 4.10-9, eight-foot tall noise-attenuation barriers shall be constructed along Nichols Road (i.e., at the northern lot lines of Lots 35 to 60 and Lots 80 to 81) and the western lot line of Lot 81, and six-foot tall noise-attenuation barriers shall be constructed at the western lot lines of Lots 82 and 83. The recommended noise control barriers shall be constructed so that the top of each wall and/or berm combination extends to the recommended height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the recommended height above the highest point between the residential home and the road. The barrier shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways, and a minimum transmission loss of 20 dBA. The noise barrier shall be constructed using the following materials:</p> <ul style="list-style-type: none">▪ Masonry block;▪ Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue and groove wood of sufficient weight per square foot;▪ Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot capable of providing a minimum transmission loss of 20 dBA;▪ Earthen berm; or▪ Any combination of these construction materials <p>The barrier shall consist of a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking.</p>		Tract Map No. 37305



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>MM 4.11-5 Prior to the issuance of building permits for Lots 35 to 60, Lots 79 to 100, or Lots 110 to 113 of Tentative Tract Map No. 37305, and prior to issuance of building permits for the proposed hotel use, the City of Lake Elsinore shall ensure that the following noise abatement measures are included in the building plans:</p> <ul style="list-style-type: none">▪ Windows & Glass Doors: All windows and/or glass doors shall be well-fitted, well weather-stripped assemblies and shall have a minimum, standard sound transmission class (STC) ratings as follows:<ul style="list-style-type: none">○ Minimum STC ratings of 27 for all windows and/or glass doors at residential lots 35 to 60, 79 to 100, and 110 to 113.○ Minimum upgraded STC ratings of 32 for all hotel building windows and/or glass doors facing I-15.▪ Doors: All exterior doors shall be well weather-stripped and have minimum STC ratings of 27. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating.▪ 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.▪ Residential Roofs: Roof sheathing of wood construction shall be per manufacturer's specifications or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specifications 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	Project Applicant/ Building & Safety Division	Prior to the issuance of building permits for Lots 35 to 60, Lots 79 to 100, or Lots 110 to 113 of Tentative Tract Map No. 37305, and prior to issuance of building permits for the proposed hotel use



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>which satisfies the requirements of the Uniform Building Code.</p> <p>MM 4.11-6 Prior to issuance of building permits for the proposed hotel use, a final noise study shall be prepared to finalize the mitigation measures identified in Mitigation Measure MM 4.10-5 using the precise grading plans and actual building design specifications, and shall include modified or supplemental mitigation, if necessary, to meet the City of Lake Elsinore 45 dBA CNEL interior noise level standard for hotel uses.</p> <p>MM 4.11-7 As a condition of the occupancy permit for the proposed gas station use, operating hours for the car wash shall be specified as permitted between 7:00 a.m. to 10:00 p.m. and prohibited between 10:00 p.m. to 7:00 a.m. Permanent, durable, weather-proof signs shall be posted at the gas station in the location of the car wash entry drive clearly indicating the car wash hours of operation as 7:00 a.m. to 10:00 p.m. The City of Lake Elsinore shall verify that the signs are posted prior to the issuance of the gas station occupancy permit. The City's Code Enforcement Division shall be responsible for enforcing the hours of operation.</p> <p>CRDR 4.11-1 Future residents and tenants of the proposed Project would be subject to applicable provisions of Chapter 11.176, Noise Control, of the Lake Elsinore Municipal Code, which was adopted to control unnecessary, excessive, and annoying noise and vibration in the City.</p>	<p>Project Applicant/ Building & Safety Division</p> <p>Project Applicant, Car Wash Operator/ Planning Division, Code Enforcement Division</p> <p>Future Project Residents/ Code Enforcement Division</p>	<p>Prior to issuance of building permits for the proposed hotel use</p> <p>Prior to issuance of occupancy permits for the proposed gas station use</p> <p>Throughout the life of the proposed Project</p>
4.12 Paleontological Resources				
Threshold a): The Project site has a "Low Potential" to yield nonrenewable paleontological resources. There were no surface-exposed fossils or fossiliferous sedimentary units found during the field surveys conducted on site. In addition, the metamorphic and late Quaternary young alluvial fan	Less than Significant	Impacts would be less than significant; therefore, mitigation is not required.	N/A	N/A



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
sediments across the entire Project site indicates a low likelihood that any fossiliferous deposit would be present within the Project area and its surrounding areas. Thus, the Project would not impact any known paleontological resource or unique geological feature. Impacts would be less than significant.				
4.13 Population and Housing				
<p>Threshold a): Implementation of the Project would exceed local and regional projections. However, impacts associated with the Project's proposed increases in population on-site have been evaluated throughout this EIR, and mitigation measures have been imposed where necessary to reduce impacts to the maximum feasible extent. Therefore, Project impacts due to direct and indirect population growth would be less than significant.</p> <p>Threshold b): The Project would not result in the displacement of people or housing that could result in or require the construction of replacement housing; rather, the Project's development of 168 residential units would further augment the housing supply in the region. Thus, no impact associated with inducing housing demand would occur.</p>	<p>Less than Significant</p> <p>No Impact</p>	Impacts to Population and Housing as a result of Project implementation would be less than significant and mitigation is not required.	N/A	N/A
4.14 Public Services				
<p>Threshold a): With payment of mandatory DIF fees, the proposed Project's potential direct and cumulatively-considerable impacts to the RCFD would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new fire protection facilities that could result in a significant impact to the environment.</p> <p>Threshold b): With payment of mandatory DIF fees, the proposed Project's potential direct and cumulatively-considerable impacts to the RCSD would be reduced to less-than-significant levels, and the Project would not result in or</p>	<p>Less than Significant</p> <p>Less than Significant</p>	CRDR 4.14-1 The Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard Riverside County Fire Department conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the	Project Applicant/ Riverside County Fire Department	Prior to issuance of building permits



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
require the construction of new police protection facilities that could result in a significant impact to the environment.		proposed Project.		
Threshold c): The Project would generate approximately 95 students, which would not be accommodated within LEUSD's existing capacity. Although the LEUSD would need to construct new school facilities to meet the growing demand within this part of Lake Elsinore, environmental effects of such school facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded school facilities. Furthermore, the payment of mandatory school impact fees would ensure that the Project would not result in significant direct or cumulatively-considerable impacts to the ability of the LEUSD to provide for school services. The Project would not require the construction of new school facilities that could result in a significant impact to the environment.	Less than Significant	CRDR 4.14-2 The Project would be required to adhere to City of Lake Elsinore Municipal Code Chapter 16.74, which requires payment of a development impact fee (DIF) to assist the City in providing for fire protection facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.	Project Applicant/ Building & Safety Division	Prior to issuance of building permits
		CRDR 4.14-3 The Project would be required to adhere to City of Lake Elsinore Municipal Code Chapter 16.74, which requires payment of a development impact fee (DIF) to assist the City in providing for sheriff protection facilities, including sheriff stations. Payment of the DIF fee would ensure that funds are available for additional sheriff personnel as well as capital improvements, such as land/equipment purchases and sheriff station construction.	Project Applicant/ Building & Safety Division	Prior to issuance of building permits
Threshold d): With construction of public parkland on-site as required by the City of Lake Elsinore's Park and Recreation Master Plan, the proposed Project's direct and cumulatively-considerable park impacts to the City of Lake Elsinore would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new parkland that could result in a significant impact to the environment.	Less than Significant	CRDR 4.14-4 The Project is required to comply with City of Lake Elsinore Municipal Code Chapter 3.36, which requires mandatory payment of school impact fees pursuant to Public Education Code § 17072.10-18.	Project Applicant/ Building & Safety Division	Prior to issuance of building permits
		CRDR 4.14-5 The Project would be required to comply with the City of Lake Elsinore's Parks and Recreation Master Plan, which sets forth a parkland standard of 5.0 acres per 1,000 residents, specifies parkland dedication requirements, and imposes in-lieu park impact fees to address potential parkland deficiencies.	Project Applicant/ Planning Division	Prior to Project approval and as part of site development
Threshold e): Although the Project would contribute to a need for new or expanded library facilities, environmental effects of such library facilities and associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. However, the Project would be required to	Less than Significant	CRDR 4.14-6 The Project would be required to adhere to City of Lake Elsinore Municipal Code Chapter 16.74, which requires payment of a development impact fee (DIF) to assist the City in providing for library facilities. Payment of the DIF fee would	Project Applicant/ Building & Safety Division	Prior to issuance of building permits



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contribute DIF fees, which would be used in part to provide for library space and/or new book volumes. Accordingly, with payment of DIF fees, Project impacts to library services and facilities are evaluated as less than significant on both a direct and cumulatively-considerable basis.		ensure that funds are available for capital improvements, such as land/equipment purchases and library construction.		
4.15 Recreation				
<p>Threshold a): The Project would provide a total of 8.3 acres of public parkland on-site, while only 3.1 acres are required by the City of Lake Elsinore Parks and Recreation Plan; thus, the Project would exceed the City of Lake Elsinore parkland requirement by 5.2 acres. Given the excess amount of parkland planned within the Project area, it is unlikely that future Project residents would utilize parkland resources outside of the Project boundaries to the point that physical deterioration of such facilities would occur or would be accelerated. Moreover, it is likely that any incremental increase in the use of existing recreational uses as a result of the Project would be off-set by existing City residents utilizing proposed recreational facilities on-site. Thus, the Project's impacts to existing parks and recreation facilities in the region would be less than significant.</p>	Less than Significant	<p>CRDR 4.15-1 The Project shall be required to comply with the City of Lake Elsinore Parks and Recreation Plan, which sets forth a parkland standard of 5.0 acres per 1,000 residents.</p> <p>CRDR 4.15-2 The Project shall be required to construct a 6.5-acre linear park and a 1.8-acre neighborhood park consistent with the Nichols Ranch Specific Plan. Construction of the 6.5-acre linear park and a 1.8-acre neighborhood park would serve the parkland needs of the Project's population.</p> <p>CRDR 4.15-3 The Project shall be required to comply with City of Lake Elsinore Municipal Code Chapter 16.12.</p>	<p>Project Applicant/ Planning Division</p> <p>Project Applicant/ Planning Division, Building & Safety Division</p> <p>Project Applicant/ Planning Division, Building & Safety Division</p>	<p>Prior to Project approval</p> <p>As required by the Nichols Ranch Specific Plan Phasing Plan (NRSP Figure II-11)</p> <p>As required by the Nichols Ranch Specific Plan Phasing Plan (NRSP Figure II-11)</p>
<p>Threshold b): A 6.5-acre linear park, a 1.8-acre neighborhood park, trails, and a Class II bicycle lane per the City's General Plan are proposed on the Project site. Effects associated with the physical construction of these facilities are addressed under the relevant issue areas identified within this EIR (e.g., air quality, biological resources, cultural resources etc.). As concluded throughout this EIR, the Project's direct and cumulative impacts associated with construction of the Project would be less than significant or would be reduced to the maximum feasible extent with the implementation of mitigation measures.</p>	Less than Significant	<p>CRDR 4.15-4 The Project shall be required to comply with City of Lake Elsinore Municipal Code Chapter 16.34.</p>	<p>Project Applicant/ Planning Division, Building & Safety Division</p>	<p>As required by Municipal Code Chapter 16.34</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/Monitoring Parties	Implementation Stage
4.16 Transportation and Traffic				
<p>Threshold a): Each phase of the proposed Project would result in direct and cumulatively-considerable impacts to study area intersections, traffic signal warrants, off-ramp queuing locations, freeway segments, and freeway junction merge/diverge locations. Project direct impacts would be reduced to less-than-significant levels with implementation of the required mitigation. Unavoidable impacts would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; 2) although fair-share monetary contributions have been identified for the Project's cumulatively-considerable impacts, a funding program does not currently exist for the facility and it cannot be assured that required improvements would be in place prior to the facility experiencing a deficient LOS; and/or 3) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to transportation/traffic is presented in EIR Table 4.16-34 through 4.16-38. Additionally, the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities), and impacts would be less than significant.</p> <p>Threshold b): The Project would result in direct and cumulatively-considerable impacts to CMP facilities. Unavoidable impacts to Congestion Management Program (CMP) facilities would result from one or more of the</p>	<p>Significant and Unavoidable</p> <p>Significant and Unavoidable</p>	<p>MM 4.16-1 Prior to the issuance of grading permits or improvement plans affecting Nichols Road and/or El Toro Road/Wood Mesa Court, the Project Applicant shall prepare and the City of Lake Elsinore shall approve a temporary traffic control plan. The temporary traffic control plan shall comply with the applicable requirements of the California Manual on Uniform Traffic Control Devices. A requirement to comply with the temporary traffic control plan shall be noted on all grading and improvement plans and also shall be specified in bid documents issued to prospective construction contractors.</p> <p>MM 4.16-2 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvements to the intersection of Lake Street at Nichols Rd. (#1):</p> <ul style="list-style-type: none"> Construct a second northbound through lane; Construct a second southbound through lane; Construct an eastbound left-turn lane; and Construct a westbound left turn lane. <p>The Project's fair share of the above-listed improvements is 0.3% for Phase 1 of the proposed Project.</p> <p>MM 4.16-3 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Gunnerson Street/Strickland Avenue at Riverside Drive (SR-74) (#5):</p> <ul style="list-style-type: none"> Install a traffic signal. 	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of grading permits or improvement plans affecting Nichols Road or El Toro Road/Wood Mesa Court</p> <p>Prior to issuance of certificate of occupancy for Phase 1</p> <p>Prior to issuance of certificate of occupancy for Phase 1</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; and/or 2) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to CMP facilities is presented in 4.16-34 through 4.16-38.</p> <p>Threshold c): The proposed Project would not create or substantially increase safety hazards due to a geometric design feature or incompatible use, and impacts would be less than significant.</p> <p>Threshold d): Implementation of Mitigation Measure MM 4.15-1 would require the Project Applicant to prepare a temporary traffic control plan that complies with the applicable requirements of the California Manual on Uniform Traffic Control Devices. Implementation of the traffic control plan would ensure that adverse effects to emergency access in the local area during the Project's construction phase are reduced to less-than-significant levels.</p>	<p>Less than Significant</p> <p>Less than Significant with Mitigation</p>	<p>The Project's fair share of the above-listed improvements is 0.2% for Phase 1 of the proposed Project.</p> <p>MM 4.16-4 Prior to issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall construct the following improvement at the intersection of Collier Av. At Nichols Rd. (#6):</p> <ul style="list-style-type: none"> Convert the intersection to all-way stop (AWS) control. <p>MM 4.16-5 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall construct the following improvement to the intersection of El Toro Rd. at Tereticornis Av. (#17):</p> <ul style="list-style-type: none"> Convert the intersection to all-way stop (AWS) control. <p>MM 4.16-6 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the County of Riverside, to be held in trust, for the following improvements to the intersection of El Toro Rd. at Carmella Ct. (#18):</p> <ul style="list-style-type: none"> Convert the intersection to all-way stop (AWS) control; and Remove a portion of on-street parking to provide a southbound right-turn lane. <p>The County of Riverside shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. If within five years of the date of collection of the Project Applicant's fair-share fee payment, the County of</p>	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of certificate of occupancy for Phase 1</p> <p>Prior to issuance of certificate of occupancy for Phase 1</p> <p>Prior to issuance of certificate of occupancy for Phase 1</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>Riverside has not established a fair-share funding program for the required improvements, then the City of Lake Elsinore shall return the funds to the Project Applicant. The Project's fair share of the above-listed improvements is 22.7% for Phase 1 of the proposed Project.</p> <p>MM 4.16-7 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvements to the intersection of Lake Street at Nichols Rd. (#1):</p> <ul style="list-style-type: none">Construct a second northbound through lane;Construct a second southbound through lane;Construct an eastbound left-turn lane; andConstruct a westbound left turn lane. <p>The Project's fair share of the above-listed improvement is 1.2% for Phase 2 of the proposed Project, of which 0.3% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.15-2 and 0.9% shall be paid as part of Phase 2 development pursuant to this mitigation measure.</p> <p>MM 4.16-8 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Gunnerson Street/Strickland Avenue at Riverside Drive (SR-74) (#5):</p> <ul style="list-style-type: none">Install a traffic signal. <p>The Project's fair share of the above-listed improvements is 0.6% for Phase 2 of the proposed Project (in addition to the 0.2%</p>	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of certificate of occupancy for Phase 2</p> <p>Prior to issuance of certificate of occupancy for Phase 2</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>required by Mitigation Measure MM 4.15-3 for Phase 1).</p> <p>MM 4.16-9 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Collier Avenue at Nichols Road (#6):</p> <ul style="list-style-type: none">▪ Install a traffic signal. <p>The Project's fair share of the above-listed improvements is 9.6% for Phase 2 of the proposed Project.</p> <p>MM 4.16-10 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the County of Riverside, to be held in trust, for the following improvements to the intersection of El Toro Rd. at Carmella Ct. (#18):</p> <ul style="list-style-type: none">▪ Convert the intersection to all-way stop (AWS) control; and▪ Remove a portion of on-street parking to provide a southbound right-turn lane. <p>The County of Riverside shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. If within five years of the date of collection of the Project Applicant's fair-share fee payment, the County of Riverside has not established a fair-share funding program for the required improvements, then the County of Riverside shall return the funds to the Project Applicant. The Project's fair share of the above-listed improvements is 49.0% for Phase 2 of the proposed Project, of which 22.7% shall be paid as part of Phase 1 pursuant</p>	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of certificate of occupancy for Phase 2</p> <p>Prior to issuance of certificate of occupancy for Phase 2</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>to Mitigation Measure MM 4.15-6 and 26.3% shall be paid as part of Phase 2 development pursuant to this mitigation measure.</p> <p>MM 4.16-11 Prior to the issuance of certificates of occupancy for Phase 3 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvements to the intersection of Lake Street at Nichols Rd. (#1):</p> <ul style="list-style-type: none">Construct a second northbound through lane;Construct a second southbound through lane;Construct an eastbound left-turn lane;Construct a westbound left turn lane;Construct a southbound right-turn lane; andConstruct an eastbound right-turn lane. <p>The Project's fair share of the above-listed improvement is 6.8% for Phase 3 of the proposed Project. For the first four improvements listed above, 0.3% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.15-2, 0.9% shall be paid as part of Phase 2 development pursuant to Mitigation Measure MM 4.15-7, and 5.6% shall be paid as part of Phase 3 development pursuant to this mitigation measure. For the fifth and sixth improvements listed above, the Project Applicant shall contribute the full 6.8% towards the cost of the required improvements.</p> <p>MM 4.16-12 Prior to the issuance of certificates of occupancy for Phase 3 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Alberhill Ranch Rd. at Nichols Rd. (#3):</p> <ul style="list-style-type: none">Install a traffic signal.	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of certificate of occupancy for Phase 3</p> <p>Prior to issuance of certificate of occupancy for Phase 3</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>The Project's fair share of the above-listed improvement is 17.7% for Phase 3 of the proposed Project.</p> <p>MM 4.16-13 Prior to the issuance of certificates of occupancy for Phase 3 of the proposed development, the Project Applicant shall construct the following improvement to the intersection of Lakeshore Dr. at Riverside Dr. (#4):</p> <ul style="list-style-type: none">Restripe the WB right turn lane to a WB shared through-right turn lane <p>MM 4.16-14 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Gunnerson Street/Strickland Avenue at Riverside Drive (SR-74) (#5):</p> <ul style="list-style-type: none">Install a traffic signal. <p>The Project's fair share of the above-listed improvements is 4.4% for Phase 3 of the proposed Project (in addition to the 0.2% required by Mitigation Measure MM 4.15-3 for Phase 1 and the 0.6% required by Mitigation Measure MM 4.15-8 for Phase 2).</p> <p>MM 4.16-15 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Collier Avenue at Nichols Road (#6):</p> <ul style="list-style-type: none">Install a traffic signal.	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of certificate of occupancy for Phase 3</p> <p>Prior to issuance of certificate of occupancy for Phase 3</p> <p>Prior to issuance of certificate of occupancy for Phase 3</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>The Project's fair share of the above-listed improvements is 23.2% for Phase 3 of the proposed Project (in addition to the 9.6% required by Mitigation Measure MM 4.15-9 for Phase 2).</p> <p>MM 4.16-16 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed development, the Project Applicant shall construct the following improvement to the intersection of the I-15 SB Ramps & Nichols Road (#9) with appropriate fee credits:</p> <ul style="list-style-type: none">▪ Install a traffic signal.▪ Add a SB left turn lane <p>MM 4.16-17 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed Project, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the County of Riverside, to be held in trust, for the following improvement to the intersection of El Toro Road at Carmela Court (#18):</p> <ul style="list-style-type: none">▪ Convert the intersection to all-way stop (AWS) control;▪ Remove a portion of on-street parking to provide a southbound right-turn lane;▪ Implementation of a traffic guard at this intersection during the AM peak hour only during the peak AM period when students arrive at the Temescal Canyon High School; and▪ Remove a portion of on-street parking to provide a northbound left-turn lane <p>The County of Riverside shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. If within five years of the date of collection</p>	<p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p> <p>Project Applicant/ Building & Safety Division, Traffic Engineering Division</p>	<p>Prior to issuance of certificate of occupancy for Phase 3</p> <p>Prior to issuance of certificate of occupancy for Phase 3</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
		<p>of the Project Applicant's fair-share fee payment, the County of Riverside has not established a fair-share funding program for the required improvements, then the County of Riverside shall return the funds to the Project Applicant. The Project's fair share of the above-listed improvements is 62.8%. For the first two improvements listed above, 22.7% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.15-6, 26.3% shall be paid as part of Phase 2 development pursuant to Mitigation Measure MM 4.15-10, and 13.8% shall be paid as part of Phase 3 development pursuant to this mitigation measure. For the third and fourth improvements listed above, the Project shall contribute the full 62.8% towards the costs of the required improvements. For the traffic guard, the fair share amount shall either be based on 62.8% of the total cost to establish a non-wasting endowment to pay for the required traffic guard on an on-going basis, or a fair-share annual payment to the County of Riverside shall be made by the Project's homeowners' association for the cost of the required traffic guard.</p> <p>CRDR 4.16-1 Prior to issuance of certificates of occupancy for each phase of the proposed development, the Project Applicant shall pay fees in accordance with Title 16, Chapter 16.74 (Development Impact Fees) of the City of Lake Elsinore Municipal Code.</p> <p>CRDR 4.16-2 Prior to issuance of certificates of occupancy for each phase of the proposed development, the Project Applicant shall pay fees in accordance with Title 16, Chapter 16.83 (Western Riverside County Transportation Uniform Mitigation Fee Program) of the City of Lake Elsinore Municipal Code.</p>	<p>Project Applicant/ Building & Safety Division, Planning Division</p> <p>Project Applicant/ Building & Safety Division, Planning Division</p>	<p>Prior to issuance of certificates of occupancy for each phase</p> <p>Prior to issuance of certificates of occupancy for each phase</p>
4.17 Tribal Cultural Resources				
Threshold a): Implementation of Mitigation Measures MM 4.8-1 through MM 4.8-7 would ensure that grading and other ground-disturbing activities during construction are	Less than Significant with Mitigation	Mitigation Measures MM 4.8-1 through MM 4.8-7 shall apply (refer to Subsection 4.8, <i>Historic and Archaeological Resources</i>). No additional mitigation is required.	As Required by Mitigation Measures MM	As required by Mitigation Measures MM



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
monitored by a qualified archaeologist as well as tribal monitors. The mitigation further requires the proper treatment of any resources that may be uncovered, and the avoidance of disturbance in areas where potential resources are uncovered. With implementation of the required mitigation, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and impacts would be reduced to less-than-significant levels.			4.8-1 through MM 4.8-7	4.8-1 through MM 4.8-7
4.18 Utilities and Service Systems				
Thresholds a and c): Although the Project would require the construction of new water conveyance facilities, impacts associated with the construction of water facilities would be less than significant with implementation of the mitigation measures identified throughout this EIR. Wastewater treatment services would be provided by the EVMWD, which has existing and projected capacity to serve existing and planned development within its service area, including the proposed Project. Thus, the Project would not result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Additionally, the Project would not result in a determination by the EVMWD that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitment. Additionally, the Project would construct two detention basins on site and associated drainage infrastructure, although there are no impacts to the environment that would result that are not already addressed throughout this EIR. Likewise, construction of the Project's	Less than Significant	<p>CRDR 4.18-1 The Project shall comply with the provisions of Lake Elsinore Municipal Code Title 14, Chapter 14.12 (Construction and Demolition Waste Management), which requires the preparation and implementation of a Waste Recycling Program in order to verify Project-level compliance with the provisions of Assembly Bill 341.</p> <p>CRDR 4.18-2 The Project shall comply with Lake Elsinore Municipal Code Title 16, Chapter 16.34, Section 16.34.040 (Requirements for Building Permit Issuance), which requires that prior to the issuance of a building permit, utilities such as water and sewer, when requiring extensions to serve any parcel to be developed, shall be constructed by the owner's licensed contractor and that parcels shall be deemed served by City water and sewer if the distance in feet from the closest property line to the facility to be extended shall be 200 times the number of lots to be developed.</p> <p>CRDR 4.18-3 The Project shall comply with Lake Elsinore Municipal Code Title 16, Chapter 16.52 (Improvements – Water</p>	<p>Project Applicant, Project Construction Manager/ RCDWR, Planning Division</p> <p>Project Applicant/ Building & Safety Division, Elsinore Valley Municipal Water District (EVMWD)</p> <p>Project Applicant/</p>	<p>During all Project construction and demolition activities</p> <p>Prior to issuance of building permits</p> <p>Prior to issuance of occupancy</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>electrical, natural gas, and telecommunications facilities are inherent to the Project's construction phase, and there are no impacts associated with these facilities that have not already been addressed by this EIR. Therefore, impacts would be less than significant.</p> <p>Threshold b): The UWMP bases its growth assumptions, in part, based on the land use designations of General Plans within the EVMWD's service area, and the proposed Project would generate substantially less demand for potable water than development of the site with commercial uses, as assumed in the UWMP. Because the EVMWD projects that it will have sufficient water supplies even during single and multiple dry years to meet the projected demand within its district through year 2040, and because the Project would result in less demand for potable water than is accounted for by the UWMP, it can be concluded that the EVMWD would have sufficient water supplies to serve the Project and other cumulative developments based on existing entitlements and resources. Additionally, the Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Therefore, impacts associated with the Project's water demand would be less than significant.</p> <p>Threshold d): During both construction and operation of the Project, the amount of solid waste generated by the Project would represent a nominal increase in the existing available disposal capacity of the Perris TS/MRF, the El Sobrante Landfill, the Badlands Landfill, and the Lamb Canyon Landfill. Thus, the Project would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and impacts would be less than</p>	<p>Less than Significant</p> <p>Less than Significant</p>	<p>Facilities), which requires that all required water storage and distribution facilities shall be installed by the land divider to serve each lot within the land division and shall be of such size and design to adequately satisfy the domestic and fire demands, and further requires that all water facilities shall be installed in accordance with City standards.</p> <p>CRDR 4.18-4 The Project shall comply with Lake Elsinore Municipal Code Title 16, Chapter 16.52 (Improvements – Sanitary Sewer Facilities), which requires that all sewer facilities shall be installed in accordance with the City standards and that the sewer facilities shall be of such size and design to adequately serve each lot within the land division and all existing or future tributary areas.</p> <p>CRDR 4.18-5 The Project shall comply with Lake Elsinore Municipal Code Title 19, Chapter 19.08 (Water Efficient Landscaping Requirements), which is intended to implement the requirements necessary to meet the State of California Efficiency in Landscaping Act and the California Code of Regulations Title 23, Division 2, Chapter 2.7. The purpose and intent of this Chapter is also to:</p> <ul style="list-style-type: none"> establish provisions for water management practices and water waste prevention; establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects; reduce the water demands from landscapes without a decline in landscape quality or quantity; retain flexibility and encourage creativity through appropriate design; assure the attainment of water efficient landscape goals by requiring that landscapes not exceed a maximum water demand of 70 percent of their reference evapotranspiration 	<p>Building & Safety Division, EVMWD</p> <p>Project Applicant/ Building & Safety Division, EVMWD</p> <p>Project Applicant/ Building & Safety Division</p>	<p>permits</p> <p>Prior to issuance of occupancy permits</p> <p>Prior to issuance of occupancy permits</p>



Potential Environmental Impact	Significance Determination	Mitigation Measures (MM) and City Regulations & Design Requirements (CRDR)	Responsible/ Monitoring Parties	Implementation Stage
<p>significant.</p> <p>Threshold e): Existing landfills that serve the Project site are required to comply with federal, state, and local statutes and regulations related to solid waste. Compliance with federal, state, and local statutes and regulations would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn would aid in the extension of the life of affected disposal sites. The Project would comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>(ETo) or any lower percentage as may be required by water purveyor policy or state legislation, whichever is stricter;</p> <ul style="list-style-type: none">eliminate water waste from overspray and/or runoff; andachieve 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. <p>CRDR 4.18-6 The Project shall comply with the provisions of Assembly Bill 1826 (AB 1826), which requires businesses that generate 8 cubic yards or more of organic waste per week to arrange for organic waste recycling services. The threshold amount of organic waste generated requiring compliance by businesses is reduced in subsequent years. Businesses subject to AB 1826 shall take at least one of the following actions in order to divert organic waste from disposal:</p> <ul style="list-style-type: none">Source separate organic material from all other recyclables and donate or self-haul to a permitted organic waste processing facility.Enter into a contract or work agreement with gardening or landscaping service provider or refuse hauler to ensure the waste generated from those services meet the requirements of AB 1826.	<p>Project Applicant/ Code Enforcement Division</p>	<p>During the life of the Project</p>



1.0 INTRODUCTION

1.1 PROJECT SCOPE

This Environmental Impact Report (EIR) addresses the proposed Nichols Ranch Specific Plan (“Project” or “proposed Project”) located in the City of Lake Elsinore (City), California. The Project is located south of Nichols Road, east of Interstate 15 (I-15), west of El Toro Road/Wood Mesa Court, and north of the Temescal Canyon High School (TCHS). The Project Applicant proposes to develop an approximately 72.5-acre site with 168 single-family dwelling units on approximately 31.1 acres; 14.5 acres of commercial retail; parks and recreational uses on 8.7 acres; drainage basins on 5.5 acres; open space on 1.6 acres; floodways on 5.6 acres; and backbone roadways on 5.3 acres. Section 3.0, *Project Description*, provides a detailed description of the discretionary approvals required to implement the Project (i.e., General Plan Amendment, Specific Plan, Specific Plan Amendment, Tentative Tract Map, and Change of Zone), ministerial (i.e., non-discretionary) approvals that would be required after approval of the Project’s discretionary actions (e.g. grading permits, building permits, etc.), as well as an overview of the Project’s construction and operational characteristics.

1.2 PURPOSE AND LEGAL AUTHORITY

This EIR was prepared in full compliance with the California Environmental Quality Act (Public Resources Code § 21000 *et. seq.* (“CEQA”), as amended, and the CEQA State Guidelines (Title 14 California Code of Regulations § 15000 *et seq.*) (“CEQA Guidelines”), as most recently amended in December 2018. According to CEQA Guidelines § 15002(a), the basic purposes of CEQA are to:

1. Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
2. Identify the ways that significant environmental impacts can be avoided or significantly reduced.
3. Prevent significant, avoidable significant impacts to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

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

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



This EIR is an informational document that represents the independent judgment of the City of Lake Elsinore (as the Lead Agency) for use by the City of Lake Elsinore decision-makers, responsible and trustee agencies, and members of the general public to evaluate the physical environmental effects that could result from constructing and operating the proposed Project. The City of Lake Elsinore has reviewed and, as necessary, directed revisions to all submitted drafts, technical studies, and reports supporting this EIR for consistency with City policies and requirements to ensure that this EIR reflects its own independent judgment. Governmental approvals requested from the City of Lake Elsinore by the Project Applicant include:

1. Planning Application No. 2017-29 (PA 2017-29);
2. General Plan Amendment No. 2018-01 (GPA 2018-01);
3. Specific Plan No. 2018-01 (SP 2018-01, “Nichols Ranch Specific Plan (NRSP)”);
4. Specific Plan Amendment (SPA 2017-03; “Amendment No. 3.1 to the Alberhill Ranch Specific Plan”);
5. Zone Change No. 2018-01 (ZC 2018-01); and
6. Tentative Tract Map No. 37305 (TTM 37305).

Other related discretionary and administrative actions that are required to construct and operate the Project described in this EIR are listed in Section 3.0, *Project Description*. This document complies with all criteria, standards, and procedures of CEQA §§ 21000 *et seq.* and CEQA Guidelines §§ 15000 *et seq.*

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

Accordingly, and in conformance with CEQA Guidelines § 15121(a), the purposes of this EIR are to: (1) disclose information by informing public agency decision makers and the public generally of the significant



environmental effects associated with all phases of the Project, (2) identify possible ways to minimize or avoid those significant effects, and (3) to describe a reasonable range of alternatives to the Project that would feasibly attain most of the basic Project objectives but would avoid or substantially lessen its significant environmental effects.

Before taking action to approve the Project, the City of Lake Elsinore (serving as the Lead Agency) has the obligation to: (1) ensure this EIR has been completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision making process; (3) make a statement that this EIR reflects the City of Lake Elsinore's independent judgment; (4) ensure that all significant effects on the environment are avoided or substantially lessened where feasible; and, if necessary (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines §§ 15090-15093).

The roles and responsibilities of the City of Lake Elsinore Planning Commission and City Council for Project-related approvals are as follows.

The Planning Commission: The Planning Commission will recommend to the City Council regarding if the following applications should be approved, modified, or denied: Planning Application No. 2017-29; General Plan Amendment No. 2018-01, Specific Plan No. 2018-01, Specific Plan Amendment No. 2017-03, Zone Change No. 2018-01, and Tentative Tract Map No. 37305, and will recommend to the City Council whether to certify the Final EIR (EIR) with or without modifications.

The City Council: The City Council will decide whether to approve, modify, or deny Planning Application No. 2017-29; General Plan Amendment No. 2018-01, Specific Plan No. 2018-01, Specific Plan Amendment No. 2017-03, Zone Change No. 2018-01, and Tentative Tract Map No. 37305. Project-related approvals will be subject to noticed, public hearings held before the City Council, which will include the information contained in the EIR, and the associated administrative record. Upon approval or conditional approval of the Project and certification of this EIR by the City Council, the City would conduct administrative level reviews and grant the permits and approvals needed to implement the Project.

This EIR and all supporting technical appendices are available at the City of Lake Elsinore Planning Division, 130 South Main Street, Lake Elsinore, CA 92530 during the City's regular business hours, or can be requested in electronic form by contacting the City Planning Division.

1.3 SUMMARY OF THE PROJECT EVALUATED BY THIS EIR

For purposes of this EIR, the term "Project" refers to the discretionary actions required to implement the Nichols Ranch Specific Plan Project, as proposed, and all of the activities associated with its implementation including planning, construction, and ongoing operations. The Project site consists of an approximately 72.5-acre property located south of Nichols Road, east of I-15, west of El Toro Road/Wood Mesa Court, and north of TCHS. The Project proposes to establish a new specific plan, the Nichols Ranch Specific Plan (NRSP) that would apply to the 72.5-acre Project site.



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

- **General Plan Amendment No. 2018-01 (GPA 2018-01)** proposes to amend the City of Lake Elsinore General Plan land use designation that applies to the southern 27.1 acres of the Project site from “General Commercial” to “Specific Plan.” With adoption of GPA 2018-01, land use and development on the Project site would be regulated by the NRSP.
- **Specific Plan No. 2018-01 (SP 2018-01; “Nichols Ranch Specific Plan”)** includes a land use plan that identifies 15 separate planning areas and provides development standards and design guidelines for architectural design and landscape architecture for each of the proposed land uses. The proposed land uses include 168 single-family dwelling units; 14.5 acres of general commercial that would accommodate a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including a market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses; two (2) recreational parks on 8.7 acres; 1.6 acres of open space; 5.5 acres for drainage basins; floodways on 5.6 acres; and 5.3 acres of backbone roadways.
- **Specific Plan Amendment No. 2017-03 (SPA 2017-03)** proposes Amendment No. 3.1 to the Alberhill Ranch Specific Plan, which would remove the northern 45.4 acres of the Project site that are currently located within the Alberhill Ranch Specific Plan. With approval of the Project, development of the northern 45.4 acres of the Project site would be regulated by the Nichols Ranch Specific Plan (NRSP) instead of by the Alberhill Ranch Specific Plan.
- **Zone Change No. 2018-01 (ZC 2018-01)** proposes to change the zoning designation on the southern 27.1 acres of the Project site from “Commercial Mixed Use (CMU)” to “Nichols Ranch Specific Plan.” ZC 2018-01 also would change the zoning designation of the northern 45.4 acres of the Project site from “Alberhill Ranch Specific Plan” to “Nichols Ranch Specific Plan.” Additionally, ZC 2018-01 would establish allowable uses and development standards for the 72.5-acre site.
- **Tentative Tract Map No. 37305 (TTM 37305)** proposes to subdivide an approximately 72.5-acre site to implement the following land uses proposed by the NRSP: 168 residential lots on approximately 22.74 acres; a commercial retail lot on 14.43 acres; a sewer lift station lot on 0.13 acre; a park site lot on 6.49 acres; two (2) water quality/detention basin lots on 5.45 acres; nine (9) landscape lots on 1.45 acres; three (3) open space/landscape lots on 3.04 acres; two (2) open space lots on 6.49 acres; and public streets on 12.28 acres. TTM 37305 also identifies cross-sections for Nichols Road as well as internal roadways and identifies the improvements that would be constructed as part of the Project. These circulation improvements include the realignment and construction of a segment of Nichols Road (off-site) along the Project’s frontage, construction of the western half of Wood Mesa Court (on-site), a bridge over Stovepipe Creek (on site), and on-site local roadways. TTM 37305 also would allow for the installation of on-site infrastructure improvements, such as water, sewer, and storm drain lines.



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

☐ **City of Lake Elsinore Planning Commission**

1. Recommendation to the City Council regarding certification of this EIR.
2. Recommendation to the City Council regarding adoption of GPA 2018-01 by ordinance.
3. Recommendation to the City Council regarding adoption of SP 2018-01 by ordinance.
4. Recommendation to the City Council regarding adoption of SPA 2017-03 by ordinance.
5. Recommendation to the City Council regarding approval of ZC 2018-01 by ordinance.
6. Recommendation to the City Council regarding approval of TTM 37305 by resolution.

☐ **City of Lake Elsinore City Council**

1. Certify this EIR and make appropriate CEQA findings.
2. Adoption of GPA 2018-01 by ordinance.
3. Adoption of SP 2018-01 by ordinance.
4. Adoption of SPA 2017-03 by ordinance.
5. Approval of ZC 2018-01 by ordinance.
6. Approval of TTM 37305 by resolution.

☐ **Subsequent Project Approvals**

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

1. Design Reviews and/or conditional use permits by the City of Lake Elsinore approving development of specific uses permitted or conditionally permitted by the approved zoning.
2. Tentative map(s) (including tentative map revisions) and/or final maps by the City of Lake Elsinore, to allow implementation of the Specific Plan.
3. Grading permits, road improvements, and drainage improvements by the City of Lake Elsinore and Riverside County Flood Control and Water Conservation District (RCFCWCD), to allow implementation of the Project.
4. Water and sewer system approvals by the Elsinore Valley Municipal Water District (EVMWD) to construct the necessary infrastructure to provide domestic and reclaimed water service.
5. National Pollutant Discharge Elimination System (NPDES) Permit and Clean Water Act Section 401 Water Quality Certification and/or Report of Waste Discharge issued by the Regional Water Quality



Control Board regarding water quality and the prevention of siltation, erosion, or water quality degradation.

6. Encroachment permits by the City to allow access within City rights-of-way, for construction of various roadway/circulation and utility improvements.
7. Clean Water Act Section 404 permits by the U.S. Army Corps of Engineers (ACOE) for impacts to waters of the United States.
8. Clean Water Act Section 401 permits by the Regional Water Quality Control Board (RWQCB) for impacts to jurisdictional waters.
9. 1602 Streambed Alteration permit pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code for impacts to California Department of Fish and Wildlife (CDFW) jurisdictional areas.
10. Conditional Letter of Map Revision (CLOMR) and Final Letter of Map Revision (LOMR) from the Federal Emergency Management Agency (FEMA) for minor revisions to the flood zones on site.

1.4 RESPONSIBLE AND TRUSTEE AGENCIES

CEQA § 21104 requires that all EIRs be reviewed by responsible and trustee agencies (see also CEQA Guidelines § 15082 and § 15086(a)). As defined by CEQA Guidelines § 15381, the term ‘Responsible Agency’ includes all public agencies other than the Lead Agency which have discretionary approval power over the project. A “Trustee Agency” is defined in CEQA Guidelines § 15386 as a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.

The CEQA Guidelines require that the applicable Responsible and Trustee Agencies review EIRs. For the purposes of the proposed Project, the Santa Ana Regional Water Quality Control Board (RWQCB), Federal Emergency Management Agency (FEMA), and Riverside County Flood Control and Water Conservation District (RCFCWCD) are Responsible Agencies and the California Department of Fish and Wildlife (CDFW) is a Trustee Agency.

1.5 CEQA PROCESS OVERVIEW

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

When it is determined through preliminary review that a project may likely have one or more significant effects upon the environment, then an EIR must be prepared. The “scope” of the EIR may be determined through preparation of an Initial Study and a public scoping process. The EIR should consider both the potential



project-specific (direct and indirect) and cumulative environmental impacts that could result from the implementation of the proposed project.

Pursuant to CEQA Guidelines § 15121, EIRs are primarily informational documents intended to inform the City decision-makers and the general public of the potentially significant effects of the proposed Project. The EIR should disclose all known potentially significant impacts; identify feasible means to minimize or mitigate those effects; and, consider a number of feasible alternatives to the project that might further reduce significant impacts while still attaining the project objectives. The decision-makers must consider the information in an EIR before taking action on the proposed Project. The EIR may constitute substantial evidence in the record to support the agency's action on the Project.

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

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

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

1.6 EIR SCOPE, FORMAT, AND CONTENT

1.6.1 EIR SCOPE

As a first step in complying with the procedural requirements of CEQA, an Initial Study was prepared by the City of Lake Elsinore to preliminarily identify the environmental issue areas that may be adversely impacted by the Project. Following completion of the Initial Study, the City filed a Notice of Preparation (NOP) with



the California Governor’s Office of Planning and Research (State Clearinghouse) to indicate that an EIR would be prepared to evaluate the Project’s potential to impact the environment. The NOP was filed with the State Clearinghouse and distributed to Responsible Agencies, Trustee Agencies, and other interested parties on May 25, 2018 for a 30-day public review period which ended on June 24, 2018. The NOP was distributed for public review to solicit responses to help the City identify the full scope and range of potential environmental concerns associated with the Project so that these issues could be fully examined in this EIR. Comments on the NOP were received from the following individuals and agencies:

- California Department of Transportation (CalTrans)
- Agua Caliente Band of Cahuilla Indians
- Southern California Association of Governments (SCAG)
- South Coast Air Quality Management District (SCAQMD)
- Riverside County Transportation Commission (RCTC)
- Riverside County Transportation Department
- Ruth Elaine Olson (Local Resident)

In addition, a publicly-noticed EIR Scoping Meeting was held at the Lake Elsinore Cultural Arts Center, located at 183 North Main Street, Lake Elsinore, CA 92530 on June 14, 2018, which provided members of the general public an additional opportunity to comment on the scope of environmental issues to be addressed in this EIR.

As a result of the Initial Study and in consideration of all comments received by the City on the NOP, Section 4.0 of this EIR evaluates the Project’s potential to cause adverse effects to the following environmental issue areas:

- | | |
|---|---------------------------------|
| • Aesthetics | • Land Use and Planning |
| • Air Quality | • Noise |
| • Biological Resources | • Paleontological Resources |
| • Energy | • Population and Housing |
| • Geology and Soils | • Public Services |
| • Greenhouse Gas Emissions | • Recreation |
| • Hazards and Hazardous Materials | • Transportation and Traffic |
| • Historic and Archaeological Resources | • Tribal Cultural Resource |
| • Hydrology and Water Quality | • Utilities and Service Systems |

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

Substantive issues raised in response to the NOP are summarized below in Table 1-1. The purpose of this table is to present the primary environmental issues of concern raised by public agencies and the general public



during the NOP review period. The table is not intended to list every comment received by the City during the NOP review period. All applicable environmental comments received in responses to the NOP are addressed in this EIR.

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

Table 1-1 Summary of NOP Comments

COMMENTS	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
California Department of Transportation (CalTrans)	July 26, 2018	<ul style="list-style-type: none">- Caltrans requests a Traffic Impact Study (TIS) to accurately evaluate the extent of potential impacts to the operational characteristics of the existing highway.- Caltrans encourages the provision of multimodal transportation options, including new opportunities for bus service, to reduce regional traffic.- Caltrans notes that the Project would not result in adverse impacts to Caltrans facilities.- Caltrans requests a copy of the Storm Water Pollution Prevention Plan (SWPPP) for review.- Caltrans requests an encroachment permit, if necessary, for any work performed within the State right-of-way.	EIR Subsection 4.16, <i>Transportation and Traffic</i>
Agua Caliente Band of Cahuilla Indians	June 6, 2018	<ul style="list-style-type: none">- Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office's cultural registry indicates the Project is not located within the Tribe's Traditional Use Area and does not request further consultation regarding the Project's potential effects to cultural and/or tribal cultural resources.	EIR Subsection 4.17, <i>Tribal Cultural Resources</i>
Southern California Association of Governments (SCAG)	June 22, 2018	<ul style="list-style-type: none">- SCAG recommends providing a consistency analysis with the 2016 <i>Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)</i>.- SCAG requests an analysis of Project consistency with SCAG projected demographics and growth forecasts.	EIR Subsections 4.2, <i>Air Quality</i> , and 4.9, <i>Land Use and Planning</i>



Table 1-1 Summary of NOP Comments

COMMENTS	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
		<ul style="list-style-type: none">- SCAG recommends review of the mitigation measures identified in the Final Program Environmental Impact Report for the 2016 RTP/SCS.	
South Coast Air Quality Management District (SCAQMD)	June 5, 2018	<ul style="list-style-type: none">- SCAQMD recommends the City use the CEQA Air Quality Handbook (1993) when preparing the air quality analysis.- SCAQMD recommends the City use the CalEEMod land use emissions software when preparing the air quality analysis.- SCAQMD indicates the City should identify any potential adverse air quality impacts that could occur from all phases of the project (including construction and operation) and all air pollutant sources related to the project.- SCAQMD requests that the City quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds. The SCAQMD also recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs).- The SCAQMD also recommends the City perform a mobile source health risk assessment in the event the proposed Project generates or attracts vehicular trips.- In the event that significant adverse air quality impacts are identified in association with the Project, SCAQMD identifies consulting several sources for mitigation measures.	EIR Subsection 4.2, <i>Air Quality</i>
Riverside County Transportation Commission (RCTC)	June 20, 2018	<ul style="list-style-type: none">- RCTC advises that future development along I-15 corridor is planned to develop two (2) express lanes on I-15 through the City of Lake Elsinore.	EIR Subsection 4.16, <i>Transportation and Traffic</i>

Table 1-1 Summary of NOP Comments

COMMENTS	DATE	COMMENTS	LOCATION IN EIR WHERE COMMENT(S) ADDRESSED
Riverside County Transportation and Land Management Agency (RCTLMA), Transportation Department	June 25, 2018	<ul style="list-style-type: none"> - Riverside County requests the City and project proponent to coordinate improvements on Nichols Road with the County project, which includes the proposed curb-line of Nichols Road and secondary access on El Toro Road and Dexter Avenue. - Riverside County requests the Project's traffic study adhere to the County's Traffic Study Guidelines. 	EIR Subsection 4.16, <i>Transportation and Traffic</i>
Ruth Elain Olson (Local Resident)	n.d.	<ul style="list-style-type: none"> - Requests the following improvements: <ul style="list-style-type: none"> • Wood Mesa Court put through to Nichols Road • Sidewalks constructed from Central to Nichols - Identifies potential Air Quality concerns for nearby elderly residents 	EIR Subsection 4.2, <i>Air Quality</i> ; and 4.16, <i>Transportation and Traffic</i>

1.6.2 CONTENT AND ORGANIZATION OF THIS EIR

This EIR contains all of the information required to be included in an EIR as specified by the CEQA Statutes and Guidelines (California Public Resources Code, Section 21000 *et. seq.* and California Code of Regulations, Title 14, Chapter 5). Additionally, on December 28, 2018, the Office of Administrative Law (OAL) approved updates to the CEQA Guidelines, which among other changes resulted in revisions to Appendix G to the CEQA Guidelines, including changes to thresholds of significance and issues requiring analysis. This EIR incorporates revisions to the CEQA Guidelines and Appendix G thereto. As summarized in Table 1-2, *Location of CEQA Required Topics*, this EIR addresses all of the substantive requirements of CEQA, as implemented through the updated CEQA Guidelines. The issue of energy, which was added to Appendix G, is evaluated in EIR Subsection 4.4. Additionally, the issue of wildfire, which also was added as a new topic to Appendix G, is evaluated as part of EIR Subsection 4.7, *Hazards and Hazardous Materials*, while the issue of paleontological resources and unique geologic features is addressed in EIR Subsection 4.12, *Paleontological Resources*.

Table 1-2 Location of CEQA Required Topics

CEQA REQUIRED TOPIC	CEQA GUIDELINES REFERENCE	LOCATION IN THIS DEIR
Table of Contents	§ 15122	Table of Contents
Summary	§ 15123	Section S.0
Project Description	§ 15124	Section 3.0



CEQA REQUIRED TOPIC	CEQA GUIDELINES REFERENCE	LOCATION IN THIS DEIR
Environmental Setting	§ 15125	Section 2.0
Consideration and Discussion of Environmental Impacts	§ 15126	Section 4.0 & Section 6.0
Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented	§ 15126.2(b)	Section 4.0 & Subsection 5.1
Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be implemented	§ 15126.2(c)	Subsection 5.2
Growth-Inducing Impact of the Proposed Project	§ 15126.2(d)	Subsection 5.3
Analysis of the Project's Energy Conservation Measures	§ 15126.5(c), Appendix F	Subsection 4.4
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	§ 15126.4	Section 4.0 & Table S-1
Consideration and Discussion of Alternatives to the Proposed Project	§ 15126.6	Section 6.0
Effects Not Found to be Significant	§ 15128	Subsection 5.4
Organizations and Persons Consulted	§ 15129	Section 7.0 & Technical Appendices
Discussion of Cumulative Impacts	§ 15130	Section 4.0
Wildfire Hazards	Appendix G, Subsection XX	Subsection 4.7
Paleontological Resources and Unique Geologic Features	Appendix G, Subsection VII	Subsection 4.12

In accordance with the CEQA Statutes and the 2018 update to the CEQA Guidelines, this EIR is organized in the following manner:

- **Section S.0, Executive Summary**, provides an overview of the EIR document and CEQA process. The Project, including its objectives, is described, and the location and regional setting of the Project



site is documented. In addition, the Executive Summary discloses that there are no potential areas of controversy related to the Project, including those issues identified by other agencies and the public, and identifies potential alternatives to the proposed Project that would reduce or avoid significant impacts, as required by CEQA. Finally, the Executive Summary provides a summary of the Project's impacts, mitigation measures, and conclusions, in a table that forms the basis of the EIR's Mitigation, Monitoring and Reporting Program.

- **Section 1.0, Introduction**, provides introductory information about the CEQA process and the responsibilities of the City of Lake Elsinore, serving as the Lead Agency for this EIR; a brief description of the Project; the purpose of this EIR; applications proposed by the Project Applicant that would require discretionary City approvals; permits and approvals required by other agencies; and an overview of the EIR format and content.
- **Section 2.0, Environmental Setting**, describes the environmental setting, including an overview of the regional and local setting, and provides descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this EIR's NOP was released for public review on May 25, 2018. The setting discussion also addresses the relevant regional planning documents that apply to the Project site and vicinity.
- **Section 3.0, Project Description**, serves as the EIR's Project Description for purposes of CEQA and contains a level of specificity commensurate with the level of detail proposed by the Project, including the summary requirements pursuant to CEQA Guidelines § 15123. This section provides a detailed description of the Project, including its purpose and main objectives; design features; landscaping; site drainage; utilities; grading and construction characteristics; and operational characteristics expected over the Project's lifetime. In addition, the discretionary actions required of the City of Lake Elsinore and other government agencies to implement the Project are discussed.
- **Section 4.0, Environmental Analysis**, provides an analysis of the potential direct, indirect, and cumulative impacts that may occur from implementing the proposed Project. The topics analyzed in this section include the topics summarized above under Section 1.6.1. Topics that were found to have no potential of being significantly impacted as part of the scoping process are discussed in Section 5.0, *Other CEQA Considerations*. A conclusion concerning significance is reached for each discussion; mitigation measures are presented as warranted. The environmental changes identified in Section 4.0 and throughout this EIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also describe the terms "effects" and "impacts" as being synonymous (CEQA Guidelines § 15358).

In the environmental analysis subsections of Section 4.0, the existing conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementing the proposed Project. Impacts are evaluated on a direct, indirect, and cumulative basis. Direct impacts are those that would occur directly as a result of the proposed Project. Indirect impacts represent secondary effects that would result from Project implementation.



Cumulative effects are defined in CEQA Guidelines § 15355 as “...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”

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

- **Section 5.0, Other CEQA Considerations**, includes specific topics that are required by CEQA. These include a summary of the Project’s significant and unavoidable environmental effects, a discussion of the significant and irreversible environmental changes that would occur should the Project be implemented, an analysis of the Project’s energy consumption, as well as potential growth-inducing impacts of the proposed Project. Section 5.0 also includes a discussion of the potential environmental effects that were found not be significant during the preparation of this EIR.
- **Section 6.0, Project Alternatives**, describes and evaluates alternatives to the proposed Project that could reduce or avoid the Project’s adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. A range of four alternatives is presented in Section 6.0.
- **Section 7.0, References**, cites all reference sources used in preparing this EIR and lists the agencies and persons that were consulted during preparation of this EIR. Section 7.0 also lists the persons who authored or participated in preparing this EIR.

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

1.6.3 USE OF THIS EIR

This EIR will be made available for review by the public and public agencies for a minimum period of 45 days to provide comments “on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated” (CEQA



Guidelines § 152049(a)). Responses to written comments received during the public review period will be included in the Final EIR. During the decision-making process, the Project and its design features, objectives, merits, environmental consequences, and socioeconomic factors, among other information contained in the Project's administrative record, will be considered by Lake Elsinore decision-makers. If the Final EIR is certified and the Project approved, other public agencies with permitting authority over all, or portions, of the Project will be able to use the Final EIR as part of their permitting processes to evaluate the environmental effects of the Project as they pertain to the approval or denial of applicable permits.

1.7 ISSUES TO BE RESOLVED BY THE DECISION-MAKING BODY

The primary issues to be resolved by the decision-making body for the proposed Project involves the Project's significant and unavoidable impacts in the issue areas of air quality; biological resources; and transportation and traffic. These issues are addressed in EIR Subsections 4.1, 4.3, and 4.16, respectively. The City of Lake Elsinore City Council will need to evaluate whether the mitigation measures proposed to reduce the Project's unavoidable impacts adequately reduce Project impacts to the maximum feasible extent. The City Council also will make a determination as to whether the Project's benefits outweigh these adverse environmental effects in support of adopting a Statement of Overriding Considerations pursuant to CEQA Guidelines § 15093. Finally, the City Council will decide whether to approve one of the Project alternatives in lieu of the proposed Project, if it is determined that one of the alternatives is feasible and its approval would serve to substantially reduce or avoid significant environmental impacts.

1.8 INCORPORATION BY REFERENCE

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

This EIR relies on a number of Project-specific technical appendices that are bound separately as Technical Appendices. The Technical Appendices are available for review at the City of Lake Elsinore Planning Division, 130 South Main Street, Lake Elsinore, CA 92530, during the City's regular business hours, or can be requested in electronic form by contacting the City Planning Division. The individual technical studies, reports, and supporting documentation that comprise the Technical Appendices are as follows:

- A: Notice of Preparation, and Written Comments on the NOP
- B: Air Quality Impact Analysis
- C: Biological Technical Report



- D: Geotechnical Report
- E: Greenhouse Gas Emissions Report
- F: Phase I Environmental Site Assessment
- G: Fire Protection Plan
- H: Cultural Resources Report
- I1: Drainage Study
- I2: Water Quality Management Plan
- J: Noise Study
- K: Paleontological Resources Assessment
- L: Traffic Impact Analysis
- M: Written Correspondence
- N1: Water System Analysis
- N2: Sewer System Evaluation

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



2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL SETTING AND LOCATION

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

As shown, the City of Lake Elsinore is located north of the City of Wildomar and west of the cities of Menifee and Canyon Lake, with areas to the north and west located within unincorporated Riverside County. Regional transportation facilities in the Project site's vicinity include I-15, abutting the Project site's western boundary; State Route 74 (SR-74), located approximately 0.6-mile to the south; Interstate 215 (I-215), located approximately 9.2 miles to the northeast; and State Route 91 (SR-91), located approximately 16.9 miles to the north.

2.2 LOCAL SETTING AND LOCATION

The Project site is located east of and adjacent to I-15, south of Nichols Road, and west of Wood Mesa Court/El Toro Road. Access to the site is currently provided by Nichols Road and El Toro Road/Wood Mesa Court. The Project site encompasses Assessor Parcel Number (APNs) 389-200-038, 389-210-008, 389-210-032, 389-210-034, and 389-210-036 as illustrated on Figure 2-2, *Vicinity Map*, and Figure 2-3, *USGS Topographical Map*. The Project site is located within Section 25, Township 5 South, and Range 5 West, and is located at 32° 42' 27" North Longitude and 117° 21' 1" West Latitude.

2.3 ON-SITE AND SURROUNDING LAND USES AND DEVELOPMENT

As shown on Figure 2-4, *Aerial Photograph*, under existing conditions the Project site is mainly vacant. The northern 45.4 acres of the Project site are currently undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). Reclamation activities include grading and benching of slopes subject to mining, implementation of erosion control measures, and restoration of the site to a more natural appearance. Impacts associated with reclamation activities on the northern portions of the site were fully evaluated in a previously certified EIR for Surface Mining Permit No. 2015-01 and Amendment No. 2 to Reclamation Plan 2006-01A1 (SCH No. 2006051034), which is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and is available for review at the City of Lake Elsinore

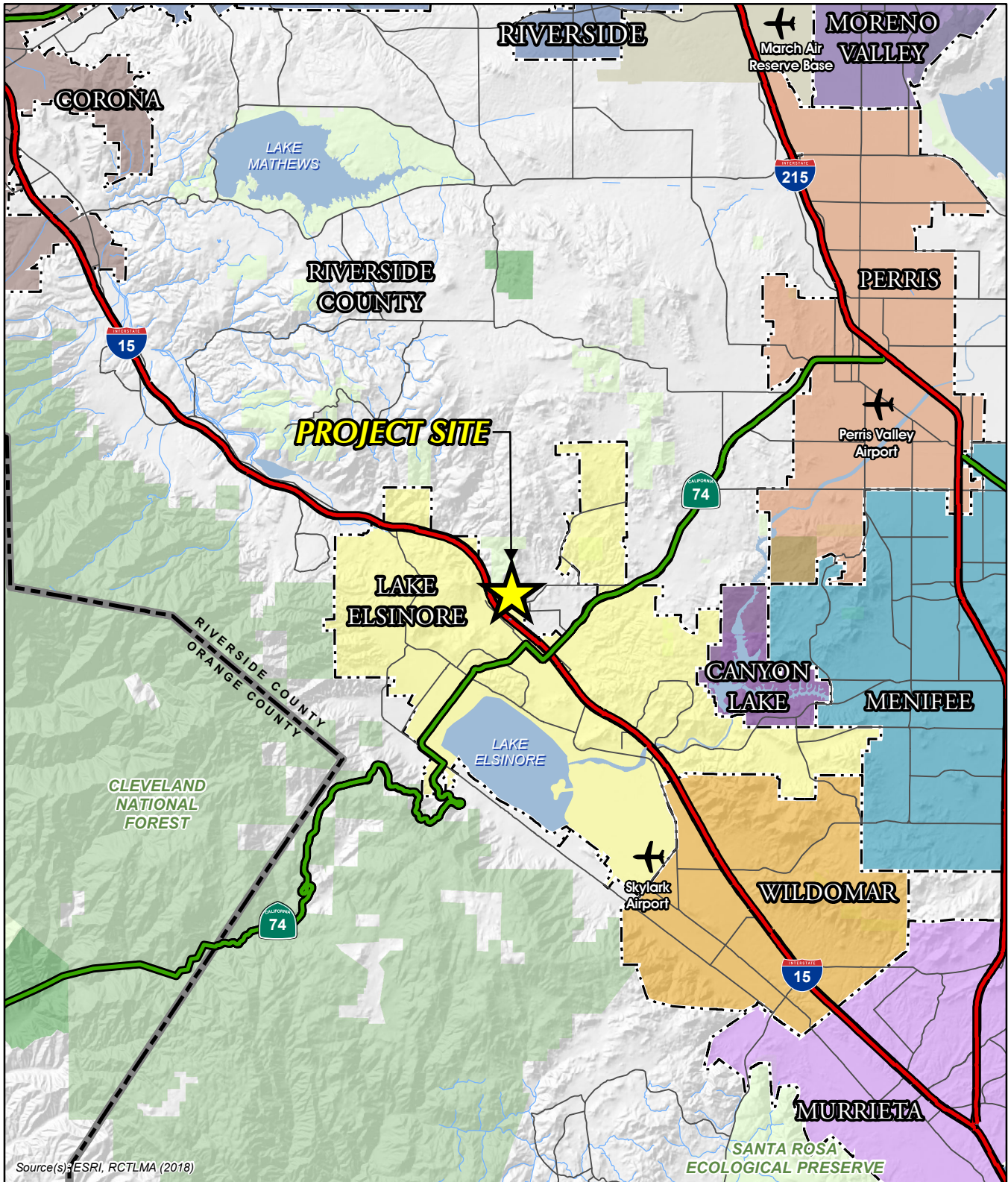
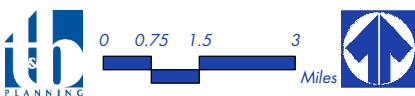


Figure 2-1



REGIONAL MAP

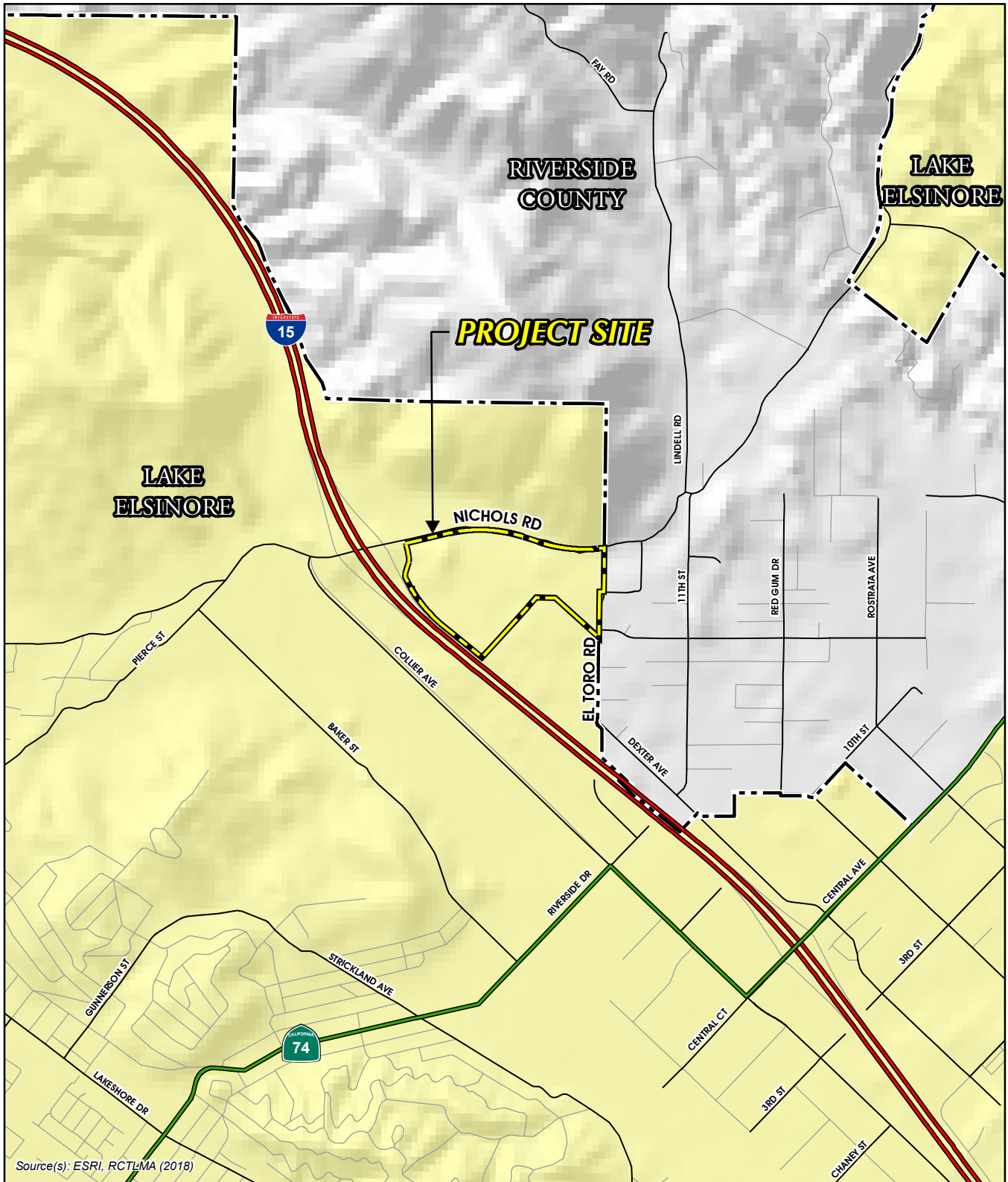
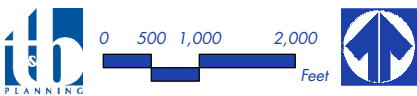


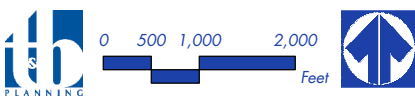
Figure 2-2



VICINITY MAP



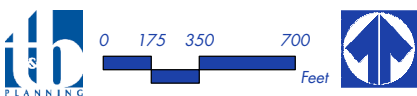
Figure 2-3



USGS TOPOGRAPHICAL MAP



Figure 2-4



AERIAL PHOTOGRAPH



Community Development Department, located at 130 South Main Street in the City of Lake Elsinore. The southern 27.1 acres of the Project site is mainly vacant and undeveloped. The southwest portion of the site contains Stovepipe Creek, which traverses the site in a northeast-to-southwest orientation.

Surrounding land uses include vacant lands, residential, school, active mining operations, and commercial land uses. Immediately north of the Project site is Nichols Road, beyond which is an active mining operation and open space. To the west of the site is the I-15 freeway, beyond which is the Lake Elsinore Outlet Center. To the south of the site is the Temescal Canyon High School (TCHS). To the east of the site are single-family homes.

2.4 PLANNING CONTEXT

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

2.4.1 CITY OF LAKE ELSINORE GENERAL PLAN

The City of Lake Elsinore's prevailing planning document is its General Plan, dated 2011. The General Plan contains elements on land use, transportation, park and recreational facilities, urban design, and housing, and provides policy direction for the City's 16 District Plans that cover specific, defined geographic areas within the City and its Sphere of Influence. Figure 2-5, *Existing General Plan Land Use Designations*, shows the land use designations assigned by the City of Lake Elsinore General Plan to the Project site and surrounding properties that are located within the City of Lake Elsinore. As shown, the City's General Plan designates the northern 45.4 acres of the Project site as "Specific Plan" (Alberhill Ranch Specific Plan, herein "ARSP") with an "Extractive Overlay." The Extractive Overlay provides for continued operations of extractive uses. The ARSP designates the northern 45.4 acres of the Project site for "Commercial – Specific Plan" land uses and allows for up to 380,000 s.f. of regional general commercial uses. The General Plan designates the southern 27.1 acres of the Project site as "General Commercial," which allow for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. As also shown on Figure 2-5, lands to the north of the Project site are designated as "Specific Plan;" areas to the west of the site are designated for "Public Institutional" and "Specific Plan" (Outlet Center Specific Plan) land uses; areas to the south are designated for "Public Institutional" land uses; and areas to the east, which are located within unincorporated Riverside County, are designated for "Low Density Residential" and "Hillside Residential" land uses. Refer to EIR Subsection 4.98, *Land Use and Planning*, for a more thorough discussion of the City's General Plan. (Lake Elsinore, 2011a, pp. 2-16 through 2-19 and Figure 2.1A; Lake Elsinore, 1997, p. 7)

2.4.2 ALBERHILL RANCH SPECIFIC PLAN

The 1,853.0-acre Alberhill Ranch Specific Plan (herein "ARSP") was adopted by the City of Lake Elsinore City Council on August 8, 1989, and includes a mix of residential, commercial, open space, recreational, and

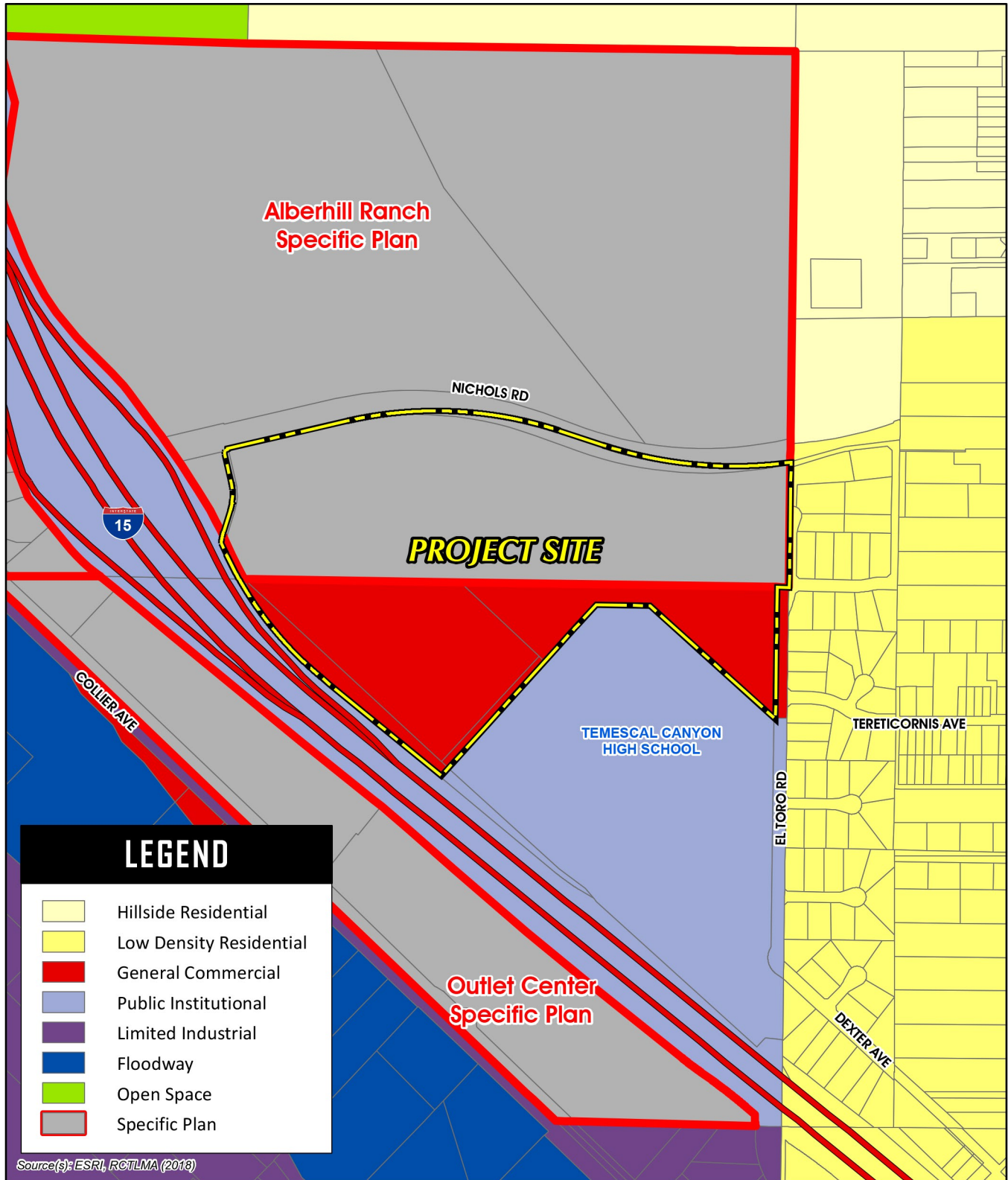
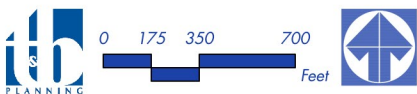


Figure 2-5



EXISTING GENERAL PLAN LAND USE DESIGNATIONS



school site land uses. Since the Specific Plan was adopted, it has been modified three (3) times. The currently-approved ARSP land use plan is depicted on Figure 2-6, *Existing Specific Plan Land Use Designations*. As shown, only the northern 45.4 acres of the Project are located within the ARSP and are designated as “Commercial – Specific Plan,” which allows for up to 380,000 s.f. of regional general commercial uses.

2.4.3 CITY OF LAKE ELSINORE ZONING ORDINANCE

The City of Lake Elsinore’s Zoning Ordinance is intended to implement the City of Lake Elsinore’s General Plan’s land use plan. As shown on Figure 2-7, *Existing Zoning Designations*, the City’s Zoning Ordinance designates the northern 45.4 acres of the Project site as “Alberhill Ranch Specific Plan,” which pursuant to the ARSP allows for up to 380,000 s.f. regional general commercial uses. The southern 27.1 acres of the Project site are zoned for “Commercial Mixed Use (CMU),” which allows for “a mix of land uses in a compact, high quality, pedestrian-friendly, interactive pattern.” (Lake Elsinore, 2014; Lake Elsinore, 2017, Chapter 17.134; Lake Elsinore, 1997, p. 7)

2.4.4 WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN

The Western Riverside County Multiple Species Habitat Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their habitats in Western Riverside County. Only the southern 27.1 acres of the Project site is subject to the Western Riverside County MSHCP. Due to a Settlement Agreement and Memorandum of Understanding (“Agreement”) between the County of Riverside and the prior owners of the northern 45.4 acres of the Project site, the northern 45.4 acres of the Project site are exempt from all provisions of the MSHCP (Riverside County, 2004). Nonetheless, proposed development of the northern 45.4 acres of the Project site is evaluated in this EIR to determine potential significant impacts due to potential conflicts with the MSHCP. In addition, the southern 27.1 acres of the Project site are subject to the MSHCP and occur within the northwestern portion of MSHCP Criteria Cell 4169. According to the MSHCP, conservation within Cell 4169 will range from 10%-20% of the Cell focusing in the southwestern portion of the Cell, indicating that the southern 27.1 acres of the Project site are not targeted for conservation by the MSHCP. Refer to EIR Subsection 4.3, *Biological Resources*, for a discussion of potential Project-related impacts to biological resources.

2.4.5 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY (RTP/SCS)

On April 7, 2016, the Southern California Association of Government’s (SCAG) Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 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 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. (SCAG, 2016)

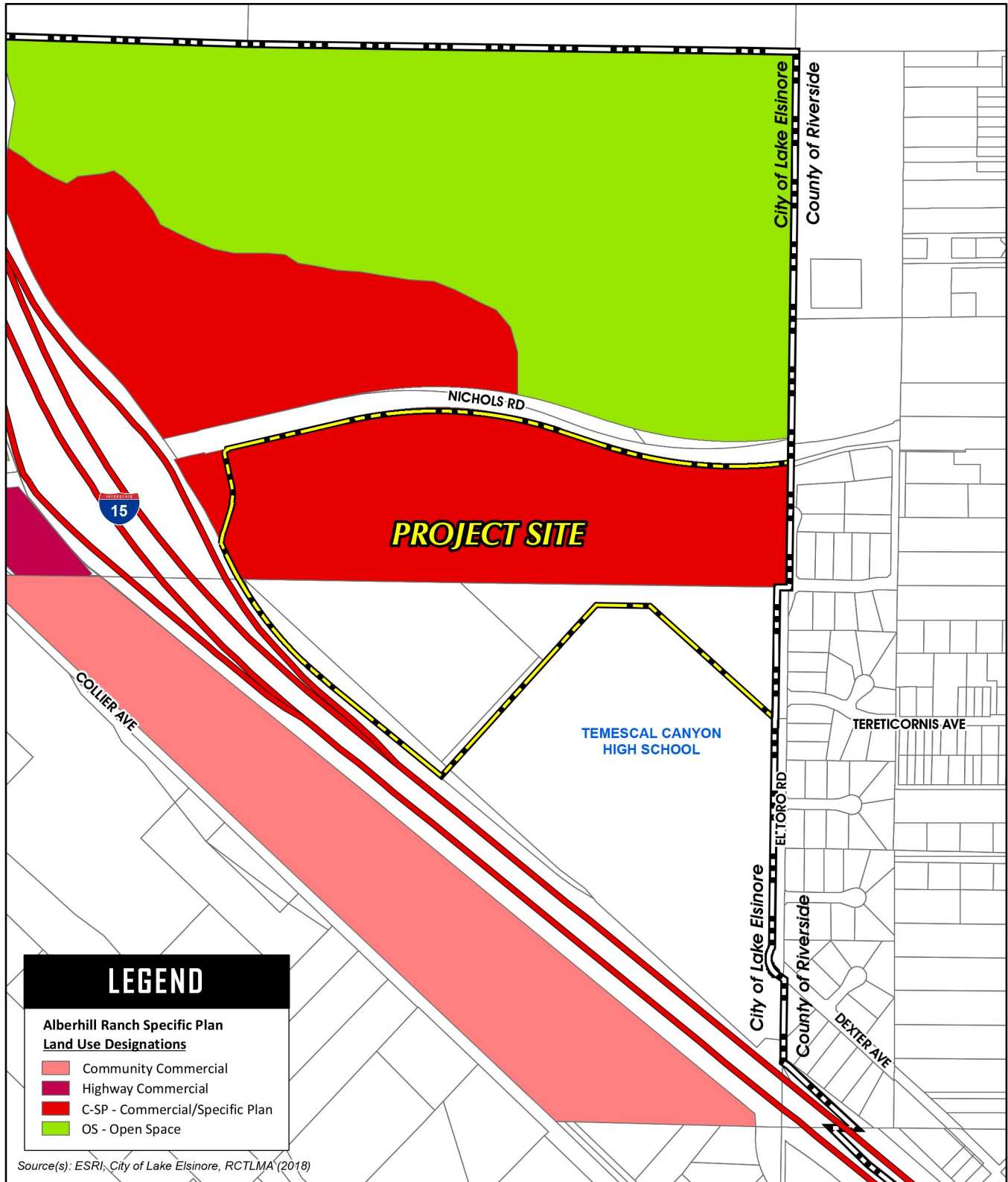
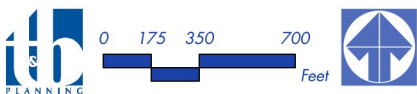


Figure 2-6



EXISTING SPECIFIC PLAN LAND USE DESIGNATIONS

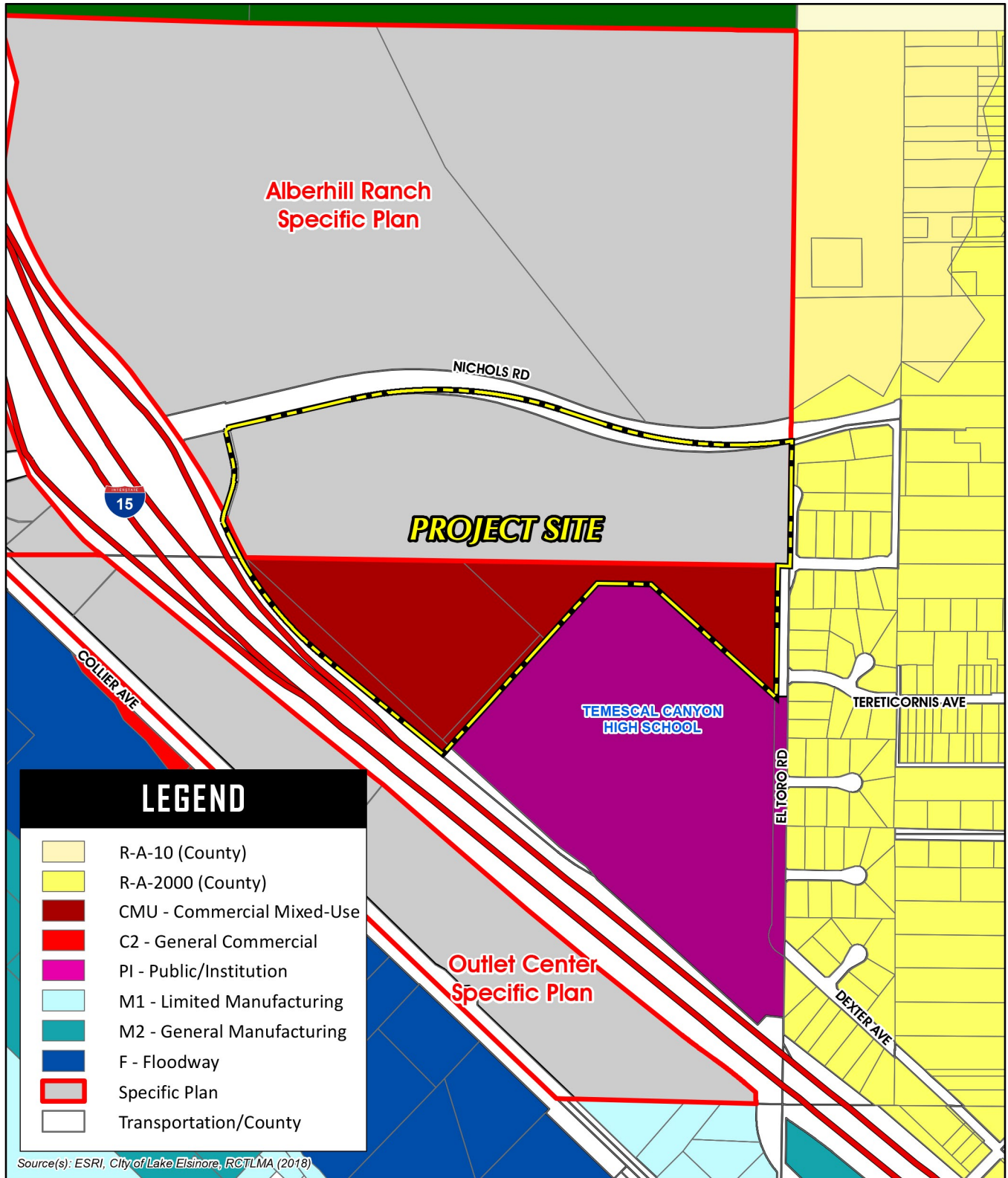
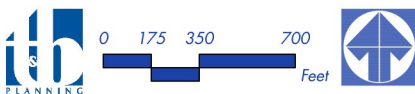


Figure 2-7



EXISTING ZONING DESIGNATIONS



2.4.6 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AIR QUALITY MANAGEMENT PLAN (AQMP)

The South Coast Air Quality Management District (SCAQMD) adopted its most recent update to its Air Quality Management Plan in March 2017 (2016 AQMP). The 2016 AQMP seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, greenhouse gases, and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts on the health of our nearly 17 million residents, including those in disproportionately impacted and environmental justice communities that are concentrated along our transportation corridors and goods movement facilities, is to reduce emissions from mobile sources, the principal contributor to our air quality challenges. For that reason, the SCAQMD worked closely engaged with the California Air Resources (CARB) and the U.S. EPA who have primary responsibility for these sources. The Plan recognized the critical importance of working with other agencies to develop new regulations, as well as secure funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy. These “win-win” scenarios will be key to implementation of this Plan with broad support from a wide range of stakeholders. The 2016 AQMP also includes transportation control measures developed by the Southern California Association of Governments (SCAG) from the 2016 Regional Transportation Plan/Sustainable Communities Strategy. Additionally, the 2016 AQMP includes the integrated strategies and measures needed to meet the National Ambient Air Quality Standards (NAAQS). The 2016 AQMP demonstrates attainment of the 1-hr and 8-hr ozone NAAQS as well as the latest 24-hr and annual PM_{2.5} standards.

2.5 EXISTING PHYSICAL SITE CONDITIONS

For purposes of establishing the setting of an EIR, and pursuant to CEQA Guidelines § 15125, the physical condition of the environment as it existed at the time the EIR’s NOP was released for public review normally is used to establish the existing conditions on the Project site. The NOP for this EIR was released for public review on May 25, 2018. Thus, for the southern 27.1 acres of the site that are not subject to reclamation activities, the site’s physical environmental conditions (“existing conditions”) are defined as those conditions that existed as of May 25, 2018. However, the northern 45.4 acres of the site will be subject to reclamation activities pursuant to the approved Reclamation Plan 2006-01A2. Pursuant to the requirements of the Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code Section 2710-2796), for sites that are subject to an approved reclamation plan, all reclamation activities must be completed prior to any new non-mining-related disturbance or development. Thus, for purposes of analysis within this EIR, the “existing condition” for the northern 45.4 acres of the site are those conditions that will exist upon completion of reclamation activities. The following subsections provide a description of the Project site’s physical environmental condition (“existing conditions”). The site’s existing (i.e., pre-reclamation) physical conditions are shown on Figure 2-4. More detailed information regarding the Project’s site’s environmental setting as it relates to a specific environmental issue area is provided in the various subsections of EIR Section 4.0, *Environmental Analysis*.

2.5.1 LAND USE

Under existing conditions, the Project site is largely undeveloped and disturbed. The northern 45.4 acres of the Project site are currently undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). The southern 27.1 acres of the Project site are mainly vacant



and undeveloped. Additionally, the Project site is traversed by Stovepipe Creek, which generally crosses the site in a northeast-to-southwest orientation.

2.5.2 TOPOGRAPHY

The topography of the Project site is relatively flat with elevations ranging from approximately 1,294 feet above mean sea level (amsl) in the southwestern portion of the site to approximately 1,370 feet amsl in the eastern portion of the site; however, following reclamation elevations on-site would range from approximately 1,294 to 1,323 feet amsl (Google Earth, 2016). Figure 2-3 depicts the Project site's topographic conditions.

2.5.3 AIR QUALITY AND CLIMATE

The Project site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, the San Jacinto Mountains to the north and east, and San Diego County to the south. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and state air quality standards. Although the climate of the SCAB is characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. More than 90% of the SCAB's rainfall occurs from November through April. Temperatures during the year range from an average minimum of 36°F in January to over 100°F maximum in the summer. 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 Ana[s]" each year. (Urban Crossroads, 2018a, p. 9)

Air quality within the SCAB is regulated by the South Coast Air Quality Management District (SCAQMD), and standards for air quality are documented in the SCAQMD's Air Quality Management Plan (AQMP), adopted in March 2017. (SCAQMD, 2017) The SCAQMD monitors levels of various criteria pollutants at 38 permanent monitoring stations and five 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, PM₁₀, and PM_{2.5} at most monitoring locations. No areas of the SoCAB exceeded federal or State standards for NO₂, SO₂, CO, sulfates, or lead. (Urban Crossroads, 2018a, p. 14) Refer to EIR Subsections 4.2, *Air Quality*, and 4.5, *Greenhouse Gas Emissions*, for a more detailed discussion of the Project's site existing air quality and climate setting.

2.5.4 BIOLOGICAL RESOURCES

As indicated above, the northern 45.4 acres of the Project site are undergoing reclamation activates pursuant to Reclamation Plan 2006-01A2 and is fully disturbed. The southern 27.1 acres of the site consist of relatively undisturbed land. Stovepipe Creek traverses the site in a northeast-southwest direction. Vegetation on the Project site includes non-native grassland, Riversidean sage scrub, disturbed Riversidean sage scrub, disturbed Riversidean sage scrub – *encelia* dominant, Riversidean alluvial fan sage scrub, ruderal, ornamental, open streambed, disturbed/developed, and ornamental vegetation. Based on biological surveys of the site and off-site improvement areas, only one sensitive plant species, Robinson's peppergrass, was observed just north of the Project site (north of Nichols Road); no other sensitive plant species were observed on site. Two special-



status animal species, coastal whiptail, and coast horned lizard, were observed at the Project site and both are species are California species of special concern. The coastal California gnatcatcher also was incidentally observed on site. Jurisdictional waters on site are limited to Stovepipe Creek and include 0.74 acres of Waters of the U.S. and 5.42 acres of Waters of the State. (VCS, 2018) Refer to EIR Subsection 4.3, *Biological Resources*, for a more detailed description of biological resources occurring on the Project site.

2.5.5 CULTURAL RESOURCE SETTING

From an archaeological perspective, regional prehistory within the Project area is defined by the Paleo- Indian Period (11,500 to 9,000 years ago), the Archaic Period (9,000 to 1,300 years ago), and the Late Prehistoric Period (approximately 1,300 years ago). Each of these periods in prehistory are discussed in EIR Subsection 4.7, *Historic and Archaeological Resources*. In summary, human habitation of Southern California dates back to approximately 11,500 years ago. Over a series of cultural periods, the area transitioned from a hunting and gathering society, to settlements of small groups of people, to large occupations near natural water sources, to formations of distinct ethnographic groups. The Late Prehistoric component in the area of western Riverside County was represented by the Luiseño with influences from the Gabrielino, and the Cahuilla Indians. (BFSA, 2018a, pp. 2.0-5 through 2.0-8) The Project site contains one (1) pre-historic resource site and one (1) historic resource site, which were determined not to be significant under CEQA. Refer to EIR Subsection 4.7, *Historic and Archaeological Resources*, and Subsection 4.16, *Tribal Cultural Resources*, for a more detailed discussion of the Project site's existing cultural resource and tribal cultural resource setting. (BFSA, 2018a, p. 5.0-1)

The Project site is not known to have historical significance to the region and does not contain any resources recognized by the National Register of Historic Places, California Registered Historic Landmarks Architecture, California Points of Historic Interest, or Riverside County Historical Landmarks (Riverside County, 2015b, Figure 4.9-2). Refer to EIR Subsection 4.7, *Historic and Archaeological Resources*, for a more detailed discussion of the Project site's existing cultural resource setting.

The Riverside County Land Information System (RCLIS) paleontological sensitivity map indicates the entire Project site has a "Low Potential/Sensitivity" to yield nonrenewable paleontological resources. (BFSA, 2018b, p. 2) Refer to EIR Subsection 4.11, *Paleontological Resources*, for a more detailed discussion of the site's paleontological context.

2.5.6 GEOLOGY AND SOILS

No active or inactive fault traces are known to traverse the site and no evidence of on-site faulting was observed during the investigation conducted for the Project site. This site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone or County of Riverside Fault Zone. The nearest active fault is the Elsinore Fault Zone located approximately 1.5 miles southwest from the Project site, and the San Jacinto Fault Zone, located approximately 18.5 miles northeast of the Project site. (RCIT, 2018; Lake Elsinore, 2011b, Figure 3.11-2) Similar to other properties throughout Southern California, the Project site is located within a seismically active region and is subject to ground shaking during seismic events.

A field exploration was conducted for the Project site, and the results determined the site subsurface materials consist of young alluvial deposits underlain by crystalline bedrock units including Mesozoic-age



metavolcanics. Specifically, the southern portion of the Project site is primarily underlain by silty sand, sand, sandy silt, and bedrock recovered as sandy gravel underlain by bedrock. (CHJ Consultants, 2018, p. 5) The northern portion of the Project site is undergoing reclamation in accordance with recommendations provided by CHJ Consultants in a previous report (CHJ Consultants, 2017). Refer to EIR Section 4.4, *Geology and Soils*, for a more detailed discussion of the Project's geological setting.

2.5.7 HYDROLOGY

The Project site is located in the Santa Ana River watershed, which drains an approximately 2,800-square-mile area and is the principal surface flow water body within the region. The Santa Ana River starts in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The Project site and vicinity are within the Santa Ana Regional Water Quality Control Board (RWQCB). The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region, which sets forth goals and objectives for protecting water quality within the region. (RWQCB, 2011)

Under existing conditions, the Project site and off-site areas tributary to the site comprise four separate drainage areas. Drainage A comprises 837.7 acres and includes a large area off-site to the north and northeast. Flows from Drainage A are conveyed through the site via Stovepipe Creek westerly towards an existing Caltrans 6'x14' RCB culvert. Drainage Area B is approximately 8.4 acres and comprises the southeastern portion of the site, with flows being conveyed to existing drainage facilities within El Toro Road. Drainage Area C encompasses the northwestern approximately 47.8 acres of the site and conveys flows towards the existing 24" Caltrans culverts along the Nichols Road/I-15 off-ramp. Drainage Area D encompasses 25.9 acres and occurs off-site, north of Nichols Road. Runoff from Drainage Area D is conveyed to existing drainage facilities within Nichols Road. (K&A, 2018a, p. 5)

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C2928G, dated August 28, 2008, the Project site is not within a mapped 100-year flood hazard area. The only portion of the Project site located within the 100-year flood hazard area is Stovepipe Creek, which traverses the Project site in a northeast-to-southeast orientation. Stovepipe Creek is located within 'Zone A' of the FEMA FIRM Map, which indicates that no base flood elevations have been determined, but that the area is within the special flood hazard areas subject to inundation by the 100-year flood. (FEMA, 2008)

Please refer to EIR Section 4.8, *Hydrology and Water Quality*, for additional discussion of the site's existing hydrologic conditions.

2.5.8 NOISE

Primary existing sources of noise in the Project site's vicinity include vehicle noise from I-15 and Nichols Road, both of which immediately abut the Project site. The background ambient noise levels in the Project area are characterized by transportation-related noise associated with the surrounding road network as well as active mining operations to the north of Nichols Road. Refer to EIR Subsection 4.10, *Noise*, for a more detailed discussion of the Project site's existing noise setting.



2.5.9 TRANSPORTATION

The major vehicular travel route in the Project area is Interstate 15 (I-15), located adjacent to the Project's western boundary. The Project site is bordered by Nichols Road to the north and El Toro Road/Wood Mesa Court to the east. Existing traffic on nearby roadways consists of both passenger vehicles and trucks accessing the TCHS as well as existing homes and businesses in the area.

There are currently no existing bus routes that serve the roadways within the study area in close proximity to the proposed Project. The closest transit lines run along the I-15 Freeway, Nichols Road to the west of the I-15 Freeway, Collier Avenue, Riverside Avenue (SR-74), and Central Avenue (SR-74). There is a regional trail planned along the east side of the I-15 Freeway and a community trail planned along Nichols Road within the site's immediate vicinity. Class II bike lanes are proposed for the portion of Nichols Road that abuts the Project site. (Urban Crossroads, 2018d, p. 51)

Refer to EIR Subsection 4.15, *Transportation and Traffic*, for a more detailed discussion of the Project's existing transportation setting.

2.5.10 UTILITIES AND SERVICE SYSTEMS

A. Water Service

Water service to the Project site is provided by the Elsinore Valley Municipal Water District (EVMWD). The EVMWD service area is composed of the Cities of Lake Elsinore and Canyon Lake, and portions of the City of Wildomar, Murrieta, and portions of unincorporated Riverside County and Orange counties. EVMWD's service area is divided into two divisions: the Elsinore Division and the Temescal Division. The Elsinore Division, in which the Project site is located, makes up the majority of the service area with approximately 42,700 accounts, encompassing an area of 96 square miles. (EVMWD, 2016, p. 3-2) EVMWD has three primary sources of potable water supply: (EVMWD, 2016, p. 6-1)

- Local groundwater pumped from District-owned wells (which accounts for approximately 33 percent of the supply from 1992-2013 years).
- Surface water from Canyon Lake Reservoir and treated by the Canyon Lake Water Treatment Plant (which accounts for approximately 10 percent of the supply from 1992-2013).
- Imported water purchased from Metropolitan Water District (MWD) through Western Municipal Water District (WMWD) (which accounts for approximately 57 percent of the supply from 1992-2013).

In addition, EVMWD has access to several additional water sources through its acquisition of the Temescal Water Company assets in 1989. These consist of groundwater from the Bunker Hill, Rialto-Colton, Riverside North, Bedford, Coldwater, and Lee Lake Basins, and surface water from Temescal Creek and several tributary creeks. (EVMWD, 2016, p. 6-1)

Existing potable water infrastructure in the Project area includes two existing reservoirs (El Toro 1 and El Toro 2), located 0.16 mile northeast of the Project site. 10- and 16-inch water lines convey potable water from the



reservoirs south within the El Toro Road right-of-way, which provides service to the residential community to the east of the Project site, the TCHS, and other areas to the south.

B. Sewer Service

Sewer service to the Project site also is provided by the EVMWD. Sewer flows from the Project site would be treated by the Regional Water Reclamation Facility (RWRf). The RWRf has an average flow capacity of 8.0 million gallons per day (MGD) and a peak flow capacity of 17.6 MGD. Treatment processes used in the RWRf include an influent lift station, headworks with bar screens and grit removal, oxidation ditches, clarifiers, filter influent lift stations, tertiary filters, ultraviolet (UV) disinfection, and biosolids dewatering. The wastewater effluent is treated with tertiary treatment and phosphorus removal to Title 22 requirements and then discharged to Temescal Wash and/or Lake Elsinore. Based on data provided by EVMWD, the annual average flow at the RWRf in 2015 was 6.5 mgd. EVMWD and Kennedy/Jenks consultants recently completed the Regional Wastewater Reclamation Facility Expansion Master Plan (Kennedy/Jenks, 2014), and the plant is planning to expand to 18.2 MGD by 2040. (EVMWD, 2016, pp. 6-16 and 6-17)

Existing sewer infrastructure in the Project area includes 8- to 12-inch sewer line within El Toro Road (south of Tereticornis Avenue) and 8- to 30-inch sewer lines within Collier Avenue. The sewer lines within El Toro Road convey flows southerly and across I-15 towards an existing 18-inch sewer main within Collier Avenue just south of the intersection with Riverside Drive. Flows within Collier Avenue are conveyed to an existing sewer lift station that is located in the southern portion of the Outlet Mall, along Collier Avenue. The sewer lift station conveys wastewater flows southerly via an existing 10-inch force main to the existing 18-inch gravity sewer located in Collier Avenue south of Riverside Drive.

C. Solid Waste Services

Solid waste collection services to the Project site would be provided by CR&R Waste Services under an exclusive franchise agreement with the City of Lake Elsinore (Lake Elsinore, 2017b). Solid waste in the Project area is disposed of at one of three landfill facilities in Riverside County: Badlands, Lamb Canyon, and/or El Sobrante.

D. Other Services

The Project site is located in the service territories of the Southern California Gas Company (natural gas) (CEC, 2015a), and Southern California Edison (electricity) (CEC, 2015b). Telephone service in the local area is provided by Verizon. Cable service in the area is provided by Time Warner, although there are alternative services available for the provision of cable and internet services.



3.0 PROJECT DESCRIPTION

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

The 72.5-acre site that is the subject of this EIR ("Project site") is located in the northeastern portion of the City of Lake Elsinore. The Project site is located east of and adjacent to Interstate 15 (I-15), south of Nichols Road, west of Wood Mesa Court/El Toro Road, and north of the Temescal Canyon High School. The Project evaluated herein (Planning Application No. 2017-29 and related actions, the "Project") would involve development of the Project site with up to 168 residential homes on approximately 31.1 acres (5.1-5.8 dwelling units per acre); 14.5 acres of commercial uses, including a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including a market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses; 8.3 acres of recreation uses; drainage basins on 5.5 acres; open space on 1.3 acres; and roadways on 5.3 acres. This EIR analyzes the physical effects associated with all components of the proposed Project, including planning, construction, and ongoing operation. The governmental approvals requested from the City of Lake Elsinore to implement the Project consist of the following:

1. Approval of Planning Application No. 2017-29;
2. Approval of General Plan Amendment No. 2018-01 (GPA 2018-01);
3. Adoption by Ordinance of Specific Plan No. 2018-01 (SP 2018-01);
4. Adoption by Ordinance of Specific Plan Amendment No. 2017-03 (SP 2017-03);
5. Approval of Zone Change No. 2018-01 (ZC 2018-01); and
6. Approval of Tentative Tract Map No. 37305 (TTM 37305).

The Project's applications, as submitted to the City of Lake Elsinore by the Project Applicant, are herein incorporated by reference pursuant to CEQA Guidelines § 15150 and are available for review at the City of Lake Elsinore Planning Division, 130 South Main Street, Lake Elsinore, CA 92530. All other discretionary and administrative approvals that would be required of the City of Lake Elsinore or other government agencies are also within the scope of the Project analyzed in this EIR.

3.1 STATEMENT OF OBJECTIVES

The underlying purposes of the proposed Project are to develop a single-family residential community with commercial areas, as well as comply to the greatest feasible extent with applicable City of Lake Elsinore



standards, codes, and policies. The following is a list of specific objectives that the proposed Project intends to achieve.

- A. To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.
- B. To establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.
- C. To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to Stovepipe Creek, where practical.
- D. To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Lake Elsinore and surrounding communities.
- E. To construct commercial and hotel uses within proximity to regional transportation facilities that will provide for employment opportunity and that can attract tenants at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local economy.
- F. To provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of Project residents and residents of surrounding communities.
- G. To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.
- H. To establish development phasing that results in logical coordinated growth.
- I. To develop the site with complementary mixed uses in a manner that preserves, to the extent feasible, natural drainages.

3.2 PROJECT'S COMPONENT PARTS AND DISCRETIONARY APPROVALS

The proposed Project consists of applications for a General Plan Amendment (GPA No. 2018-01), Specific Plan (SP No. 2018-01), Specific Plan Amendment (SPA No. 2017-03), Zone Change (ZC No. 2018-01), and a Tentative Tract Map (TTM No. 37305), which collectively are being processed under Planning Application No. 2017-29 to establish a master-planned, low-medium-density residential community (5.1 to 5.8 dwelling units per acre) with commercial uses on an approximately 72.5-acre site. Approval of these applications would allow for development of the subject property with up to 168 dwelling units on minimum 4,500 s.f. lots, 14.5 acres commercial uses, and 8.3 acres of recreational uses. A summary of the discretionary approvals sought by the Project Applicant is provided below. Additional discretionary and administrative actions that would be



necessary to implement the proposed Project are listed in Table 3-6, *Matrix of Project Approvals/Permits*, at the end of this EIR section. Project approvals also include Planning Application No. 2017-29, which is the master application under which the Project's remaining applications, as described below, are being processed.

3.2.1 GENERAL PLAN AMENDMENT NO. 2018-01 (GPA No. 2018-01)

The City of Lake Elsinore General Plan assigns a land use designation to all properties inside the City's boundaries. Development is required by law to comply with the provisions of the City's General Plan. At the time the General Plan EIR was certified in 2011, the northern 45.4 acres of the Project site were located within the City of Lake Elsinore, while the southern 27.1 acres were located within Riverside County. The southern 27.1 acres of the Project site were annexed along with other lands into the City of Lake Elsinore on November 10, 2016 (Annexation No. 83) (RLAFCO, 2016). Per the requirements of Government Code § 56375(e), there is a two-year prohibition on changing the land use on an area annexed into a city. Thus, the earliest the land use could be redesignated for the southern 27.1 acres of the Project site was November 10, 2018. General Plan Amendment No. 2018-2018-01 (GPA 2018-01) proposes to redesignate the southern 27.1 acres of the Project site from "General Commercial" to "Specific Plan" land uses. With approval of GPA 2018-01 and the Project's other discretionary applications, development of the entire 72.5-acre property would be governed by the proposed Nichols Ranch Specific Plan (SP No. 2018-01).

3.2.2 ALBERHILL RANCH SPECIFIC PLAN AMENDMENT NO. 3.1 (SPA No. 2017-03)

The Project proposes Amendment No. 3.1 to the Alberhill Ranch Specific Plan (ARSP), which would remove the northern 45.4 acres of the Project site that are currently located within the ARSP. With approval of the Project, development of the northern 45.4 acres of the Project site would be regulated by the NRSP instead of by the ARSP.

3.2.3 NICHOLS RANCH SPECIFIC PLAN (SP No. 2018-01)

A. Proposed Land Uses

The NRSP proposes the development of the 72.5-acre Project site with 168 single-family residential homes on approximately 31.1 acres; 14.5 acres of commercial uses accommodating a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses; recreation uses on 8.3 acres; drainage basins on 5.5 acres; open space on 1.3 acres; and roadways on 5.3 acres, as depicted on Figure 3-1, *Proposed Specific Plan Land Use Plan*. Additionally, Table 3-1, *Specific Plan No. 2018-01 – Land Use Summary*. Specifically, the proposed land uses within the NRSP are as follows:

- **Low-Medium Density Residential:** The Project proposes a total of 168 single-family dwelling units on 31.1 acres within Planning Areas 1 through 6 with an overall density of 5.4 dwelling units per acre (du/ac). Planning Areas 1, 2, and 3 would allow for 77 single-family homes on 14.6 acres. Planning

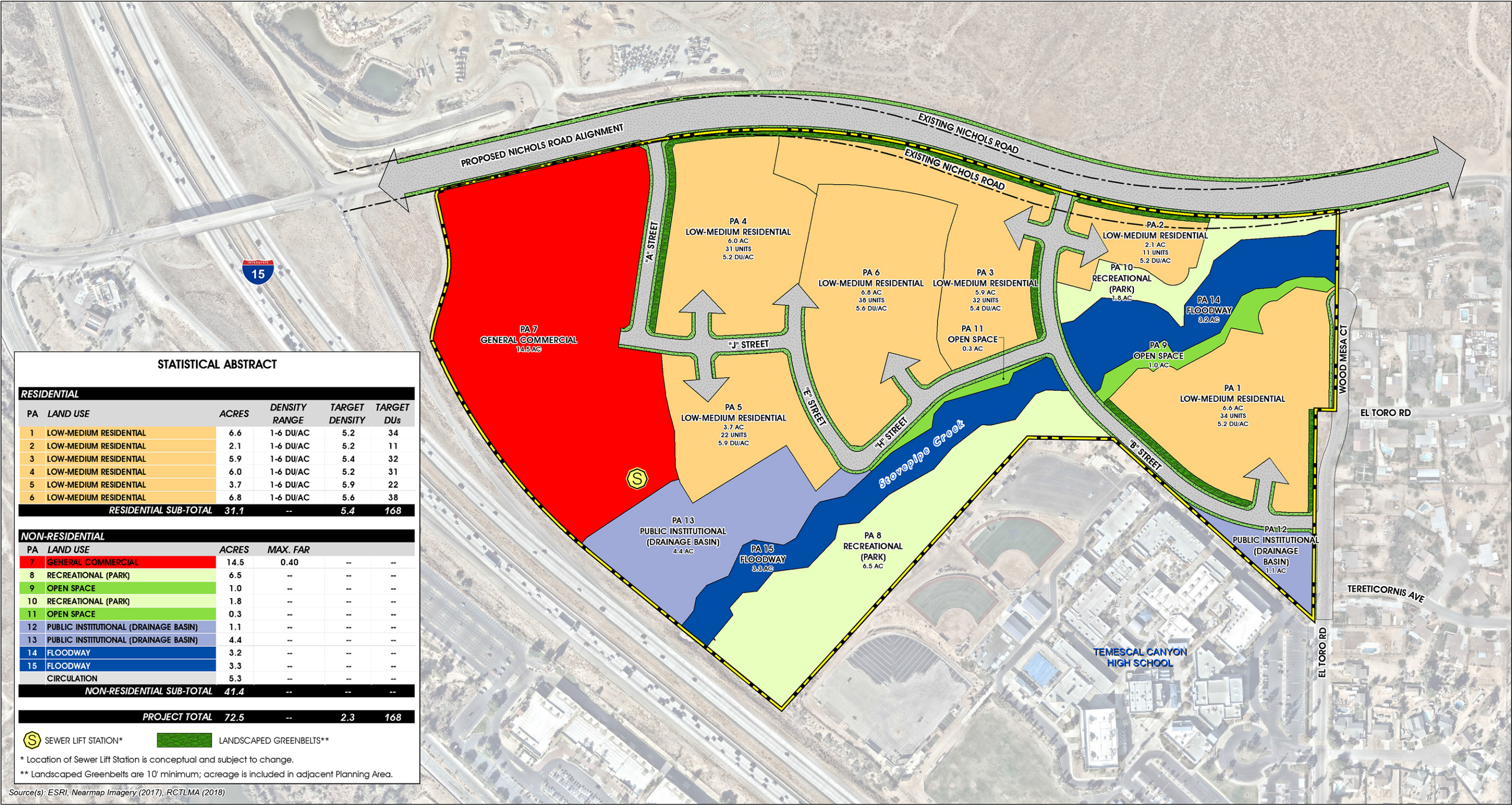
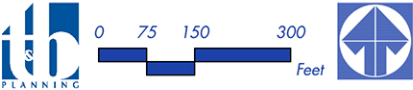


Figure 3-1



PROPOSED SPECIFIC PLAN LAND USE PLAN



Table 3-1 Specific Plan No. 2018-01 – Land Use Summary

PLANNING AREA	LAND USE	ACRES	DENSITY RANGE	TARGET DENSITY	TARGET DUS
Residential					
1	Low-Medium Residential	6.6	1-6 DU/AC	5.2	34
2	Low-Medium Residential	2.1	1-6 DU/AC	5.2	11
3	Low-Medium Residential	5.9	1-6 DU/AC	5.4	32
4	Low-Medium Residential	6.0	1-6 DU/AC	5.2	31
5	Low-Medium Residential	3.7	1-6 DU/AC	5.9	22
6	Low-Medium Residential	6.8	1-6 DU/AC	5.6	38
Residential Sub-Total:		31.1	--	5.4	168
Non-Residential					
7	General Commercial*	14.5	--	--	--
8	Recreational (Park)	6.5	--	--	--
9	Open Space	1.0	--	--	--
10	Recreation (Park)	1.8	--	--	--
11	Open Space	0.3	--	--	--
12	Public Institutional (Drainage Basin)	1.1	--	--	--
13	Public Institutional (Drainage Basin)	4.4	--	--	--
14	Floodway	3.2	--	--	--
15	Floodway	3.3	--	--	--
--	Circulation	5.3	--	--	--
Non-Residential Sub-Total:		41.4	--	--	--
PROJECT TOTAL:		72.5	--	2.3	168

*Commercial land uses are allowed at a maximum Floor Area Ratio (FAR) of 0.40.

Areas 4, 5, and 6 would allow for 91 single-family homes on 16.5 acres. Access to the residential areas on-site would be accommodated from Nichols Road and El Toro Road via proposed streets A, B, E, H, and J.

- **General Commercial:** The western 14.5 acres of the site (Planning Area 7) are proposed for general commercial land uses, and would accommodate a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including a market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses. A sewer lift station also would be accommodated in the southern portion of the commercial site. Access to the commercial site would occur from Nichols Road via Streets “A” and “J.”
- **Recreational (Park):** Two park sites are proposed within Planning Areas 8 and 10 on a total of 8.3 acres and would accommodate both passive and active recreational uses. Access to both park sites would be provided via B Street and an internal cul-de-sac within adjacent Planning Area 2.



- **Open Space:** A total of 1.3 acres of open space are proposed within Planning Areas 9 and 11 along the northern and southern edges of Stovepipe Creek. These areas would serve as a buffer between Stovepipe Creek and adjacent residential uses. Aside from grading and fuel modification, no development is planned within Planning Areas 9 and 11.
- **Public Institutional (Drainage Basin):** Two drainage basins are proposed within Planning Areas 12 and 13 on a total of 5.5 acres. The drainage basin in Planning Areas 12 would detain and treat flows from the residential uses in Planning Area 1 and a portion of B Street. The drainage basin in Planning Area 13 would detain and treat flows from the residential uses in Planning Areas 2 through 6; Streets A, B (portion), E, H, and J; and a portion of the commercial uses in Planning Area 7.
- **Floodway:** A total of 6.5 acres of the site are planned to accommodate floodways within Planning Areas 14 and 15. These planning areas are intended to convey flows from off-site areas that are tributary to Stovepipe Creek, as well as flows from the proposed on-site recreational and open space areas in Planning Areas 8 through 10. Aside from a planned roadway crossing, no disturbance or development is planned within Planning Areas 14 and 15.
- **Circulation:** A total of approximately 5.3 acres of the Project site would be dedicated to on-site backbone roadways. Primary vehicular access would be provided via Nichols Road (an east-west oriented road located north of the Project site) and via El Toro Road (a north-south oriented road located east of and adjacent to the Project site), which are planned to connect with the various local roadways planned within the SP area.

B. Specific Plan Design Guidelines

The NRSP proposes to establish development standards and design guidelines to provide guidance for future development of the site. Development standards and design guidelines would ensure that development of individual neighborhoods and the commercial site within the NRSP area are consistent with and enhance the quality and development concept for the Project area and would ensure that development of the Project would be compatible with surrounding off-site land uses. Furthermore, the NRSP would establish a Phasing Plan to provide for appropriate phased development of the proposed land uses within the NRSP area.

The Design Guidelines propose elements that define the design concept, physical character, and visual theme of the proposed community. Principal components of the Design Guidelines are the Architectural Design Guidelines and Landscape Design Guidelines, as summarized below.

The Architectural Design Guidelines address site planning and architectural elements of the residential neighborhoods. Specific elements and considerations of the built environment addressed within the Architectural Design Guidelines include: site planning and building layout; building mass and scale; architectural theme and details; and building materials and color.

The Landscape Design Guidelines provide revised landscape principles and standards to ensure that plant materials, streetscapes, monumentation, community walls/fences, parks, trails, and other amenities are compatible with the community's design theme. Additionally, the Landscape Design Guidelines establish a



water-efficient plant palette and provides principles for the design of an efficient irrigation system to conserve water resources.

For a detailed description of the proposed design guidelines, please refer to the Design Guidelines Section (Section IV) of the NRSP. The NRSP is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and available to the public for review at the City of Lake Elsinore Planning Division; 130 South Main Street; Lake Elsinore, CA 92530.

C. Master Circulation Plan

The NRSP proposes to establish a hierarchical circulation system, as illustrated on Figure 3-2, *Conceptual Vehicular Circulation Plan*, and Figure 3-3, *Roadway Cross-Sections*. Traffic is proposed to be conveyed by a hierarchical circulation system with roadway rights-of-way (ROW) ranging from 60 to 120 feet in width. The NRSP proposes the realignment of Nichols Road in order to accommodate future improvements to this roadway to an Urban Arterial standard (120 ft. ROW). In addition, the NRSP proposes the construction of a north/south connection between Nichols Road and the existing north/south-aligned portion of El Toro Road, which would create two new intersections at Nichols Road and El Toro Road. Provided below is a brief description of the Conceptual Vehicular Circulation Plan facilities.

- **Nichols Road (120-foot ROW)** is aligned in an east-west orientation along the northern Project boundary and a portion of the road would be realigned approximately 60 feet northerly of the currently planned alignment. Access to the Project site from Nichols Road is proposed via two entrances (Streets A and B). The City of Lake Elsinore General Plan Circulation Element calls for Nichols Road to be improved as an Urban Arterial with an ultimate right-of-way (ROW) of 120 feet. As planned by the NRSP, and in conformance with the General Plan, this roadway ultimately would include a ROW of 120 feet, with 82 feet of drive aisles, a 14-foot center median/left turn lane, 12-foot wide parkways with 6-foot curb-adjacent sidewalks on both sides of the road, and a 6-foot Class II bike lane in each direction. It should be noted that the Project only would construct half-width improvements to Nichols Road along the Project's frontage, and would provide for 48 feet of drive lanes, a six-foot wide curb-adjacent sidewalk within a 12-foot landscaped parkway, and an asphalt and concrete berm along the northern edge of the proposed improvements. As proposed by the Project, a transition from the half-width of the ultimate ROW to the two-lane roadway would be constructed between planned improvements along most of the Project's frontage and the existing improved section of roadway adjacent to Planning Areas 2 and 10. The Project would construct 30-feet of interim ROW within the southern half of the Nichols Road ROW. The Project would construct two 15-foot travel lanes, a 5-foot sidewalk on the southern side of the ROW, and a proposed interim rock channel, 1.5:1 ratio slope, and a proposed brow ditch. Improvements to the northern edge of Nichols Road and east of the site would occur by others in the future.
- **El Toro Road (60-foot ROW)** is aligned in a north/south orientation east of and adjacent to the Project site, and curves into an east-west alignment near the east-central Project boundary. The City of Lake Elsinore General Plan classifies this road as a Local Road with an ultimate ROW of 60 feet. The Project would construct improvements to the western edge of El Toro Road along the Project's frontage

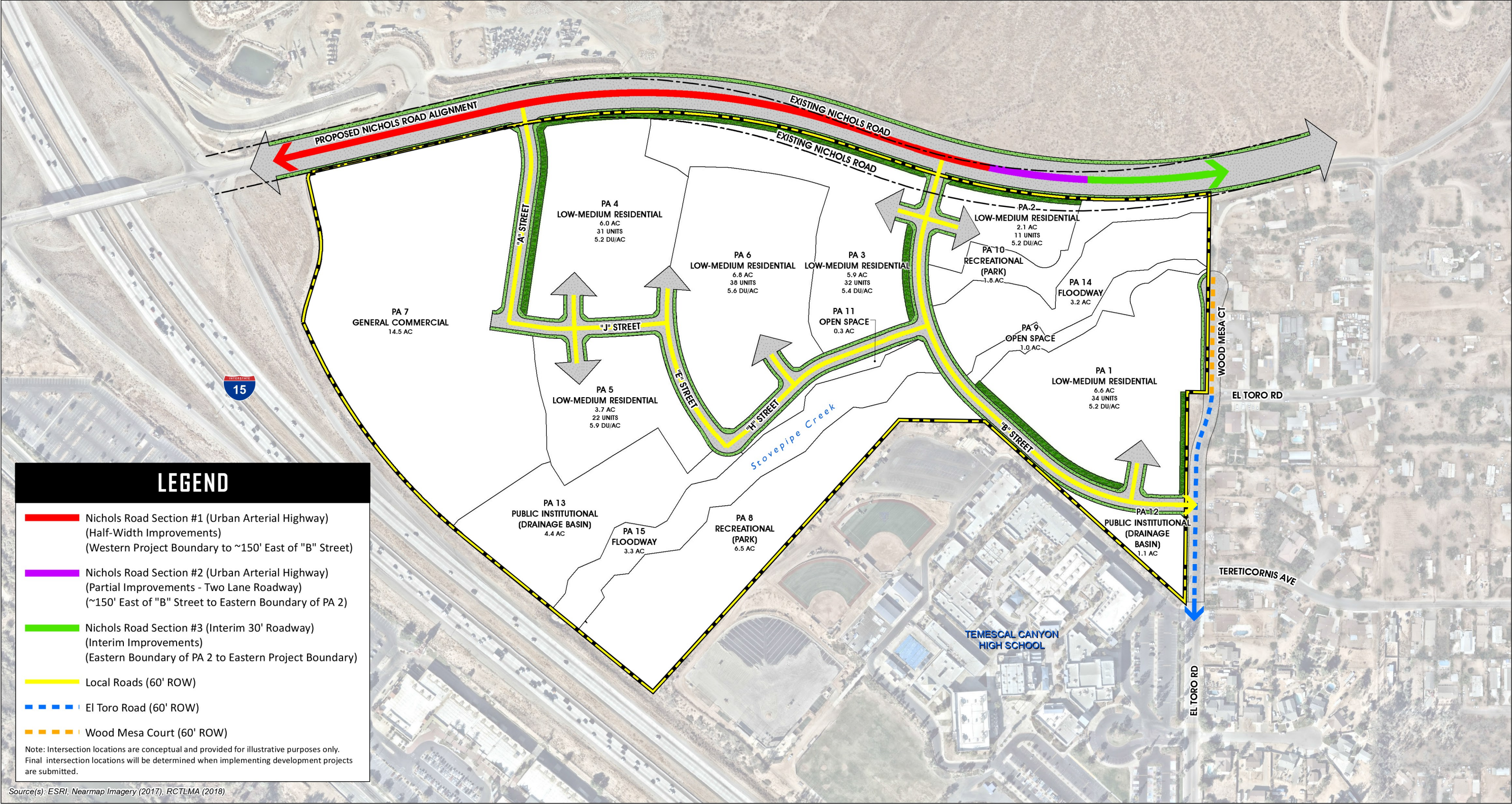
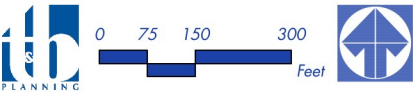
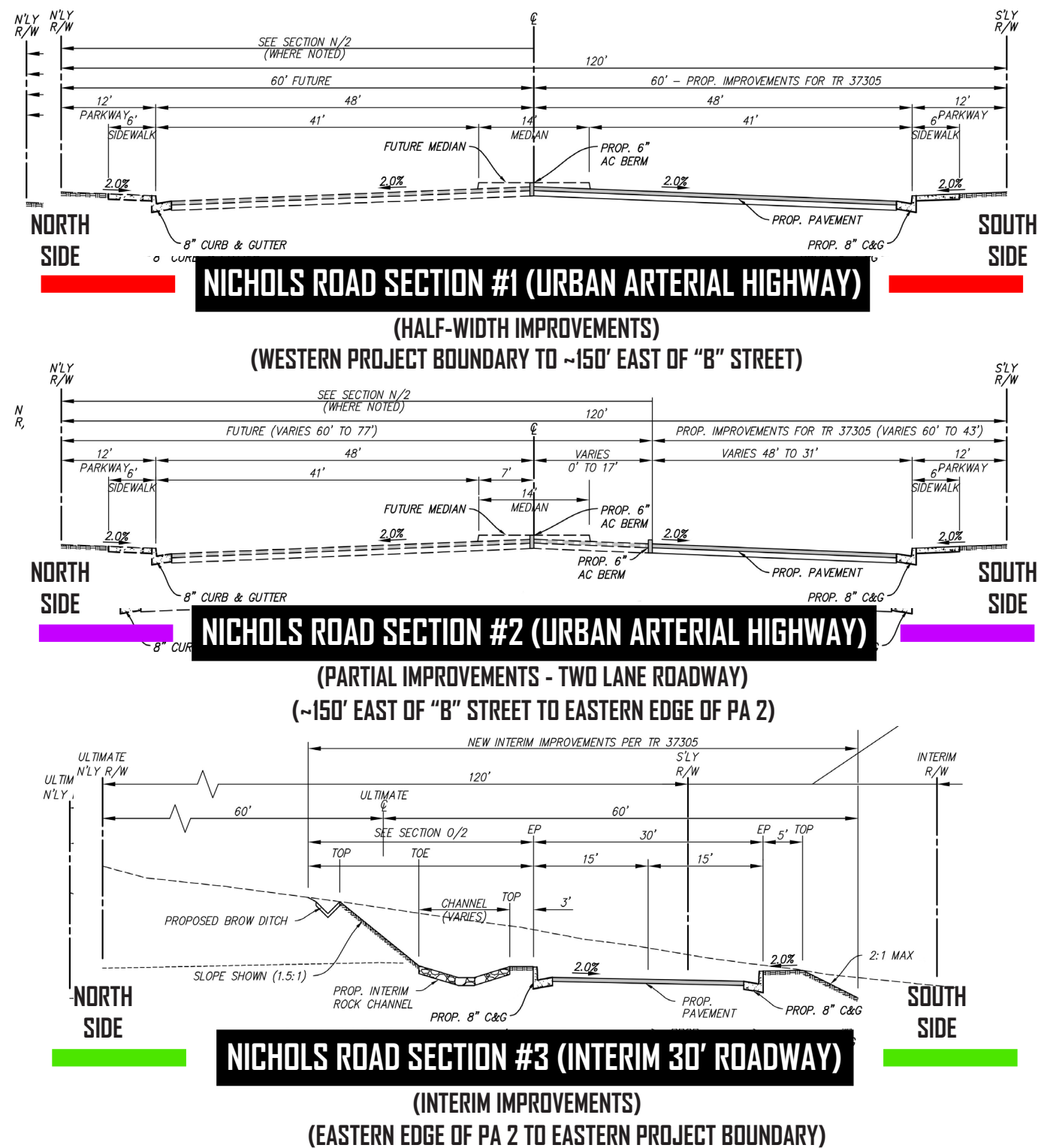


Figure 3-2



CONCEPTUAL VEHICULAR CIRCULATION PLAN



Source(s): K&A Engineering, Inc. (03-05-2018)

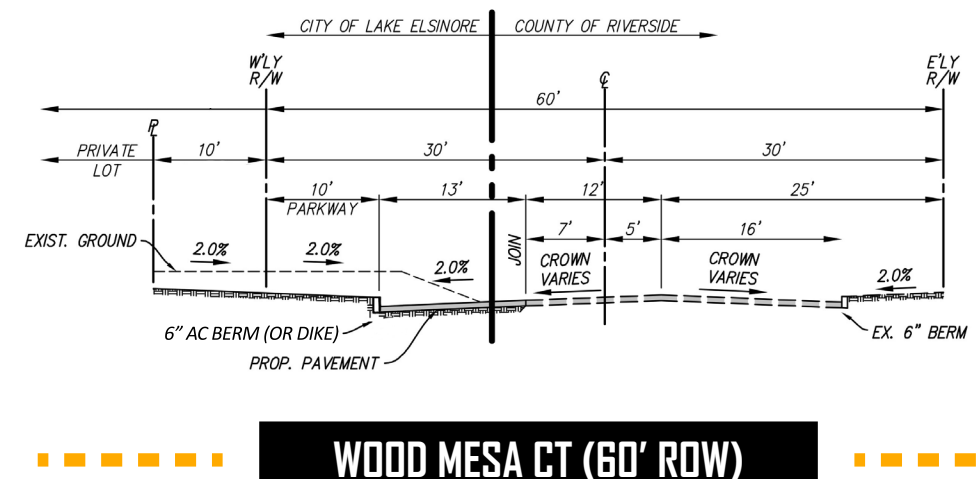
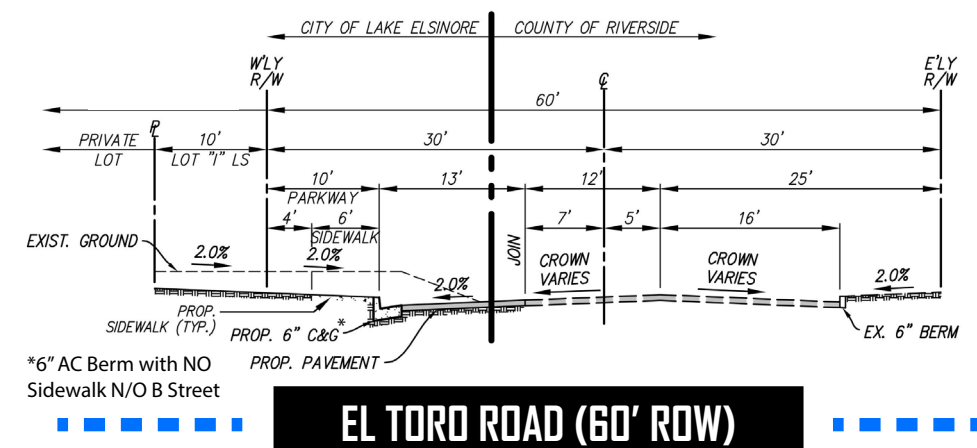
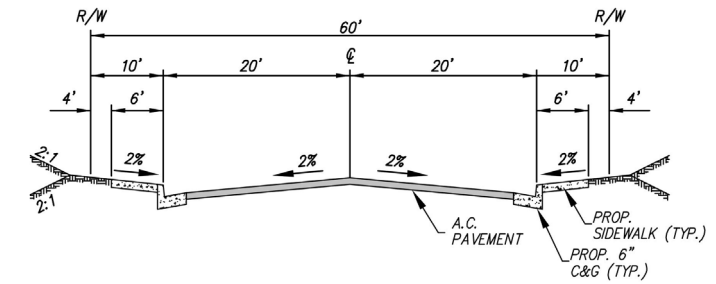


Figure 3-3



to provide for a 10-foot landscaped parkway which includes a 6-foot wide sidewalk. The easterly side of El Toro Road is within the jurisdiction of Riverside County, and improvements to the eastern side of El Toro Road would occur at the discretion of Riverside County in the future.

- **Wood Mesa Court (60-foot ROW)** occurs along the eastern boundary of the Project site, north of the 90-degree curve in El Toro Road. Wood Mesa Court is not a General Plan Circulation Element Roadway. The Project proposes to improve the western edge of Wood Mesa Court, on-site, and would provide for construction to complete the remaining cul-de-sac bulb and a 10-foot wide parkway. It should be noted that no improvements are proposed to the portion of Wood Mesa Court that traverses Stovepipe Creek.
- **Local Roads (60-foot ROW)** are proposed throughout the Project site to provide access to the residential, commercial, and recreational uses proposed on-site. Streets A, B, E, H, and J would serve as the primary backbone local roadways, while additional local roadways would be constructed within the individual residential planning areas. Local Streets would be public facilities and would have a total ROW of 60 feet, with 40 feet of drive aisles and 10-foot parkways on each side with six-foot wide curb-adjacent sidewalks.

D. Proposed Drainage Plan

The conceptual drainage system for the proposed Project is illustrated on Figure 3-4, *Conceptual Master Drainage Plan*. As shown, the Project proposes to create three primary drainage areas. Drainage Area A would encompass residential Planning Areas 2, 3, 4, 5, and 6, and Streets B (portion), E, H, and J, and would convey runoff to the drainage basin proposed in Planning Area 13. Following water quality treatment, runoff from Drainage Area A would be conveyed to Stovepipe Creek and through the 6-foot x 14-foot culvert beneath I-15. Drainage Area B would encompass the residential uses in Planning Area 1 and a portion of B Street and would convey runoff to the drainage basin proposed in Planning Area 12. Following water quality treatment, flows from Planning Area 12 would be conveyed to existing storm water drainage facilities within El Toro Road. Drainage Area C would encompass most of the commercial site in Planning Area 7. Under interim conditions, prior to development of Planning Area 7 but following mass grading of the site, runoff would be discharged to the drainage basin in Planning Area 13. A local storm drain system would be installed as part of development for Planning Area 7. Following development of Planning Area 7, peak storm flows would be directed via the local storm drain system to the two 24-inch culverts under I-15, while the “first flush” water quality flows would be routed for treatment to the water quality basin within Planning Area 13. Drainage from the site ultimately would confluence west of I-15, and ultimately would discharge the Temescal Canyon Reach, and eventually to the Santa Ana River.

E. Proposed Water Plan

Domestic water service would be provided to the Project site by the Elsinore Valley Municipal Water District (EVMWD). The Project’s future potable water demand would be met by EVMWD via an existing supply of water from the use of purchased or imported water, groundwater, and surface water. The extension of the potable water system would require the construction of transmission pipelines in order to provide an adequate level of service. The potable water system would provide a sufficient supply during peak periods including

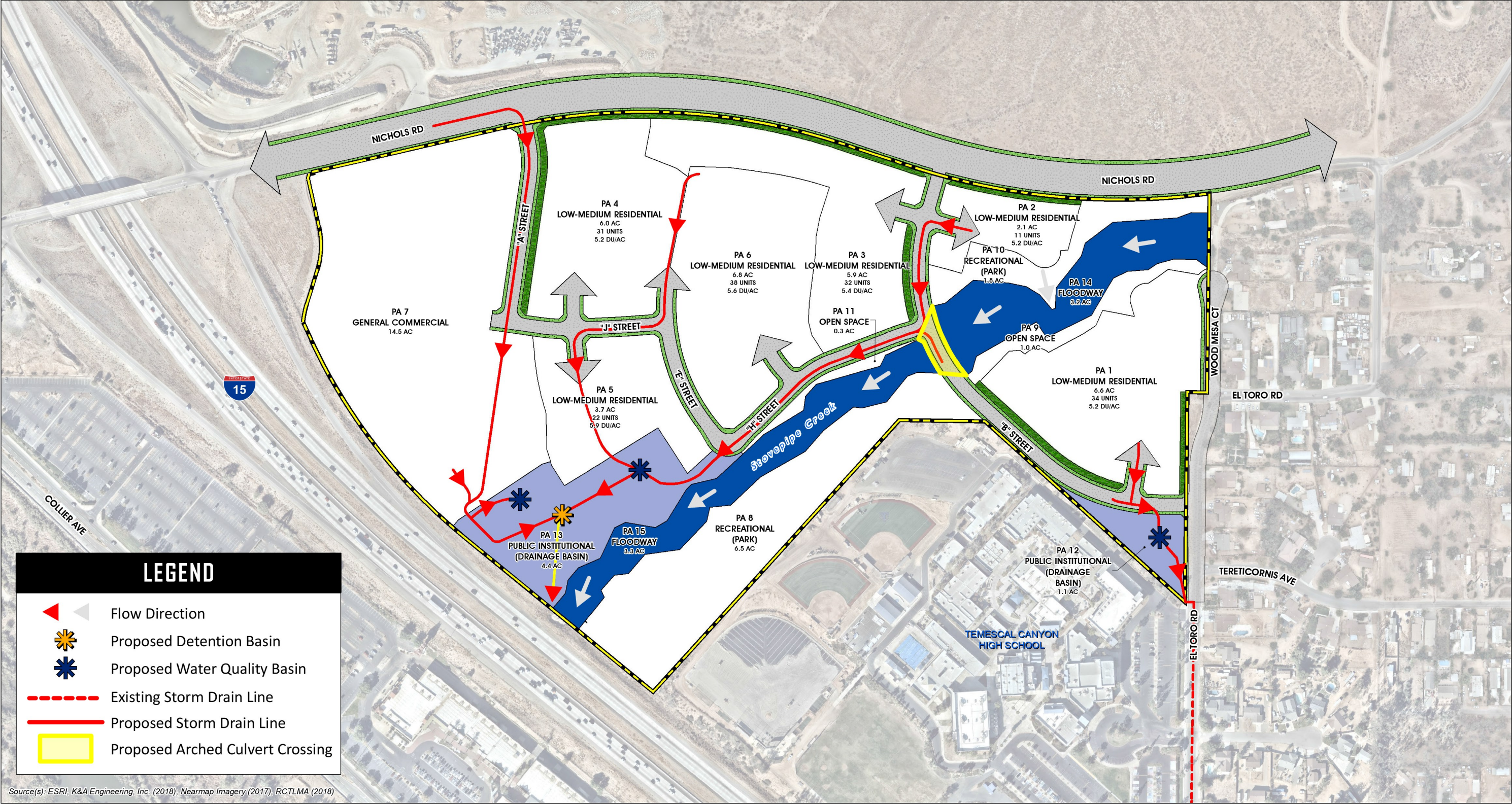
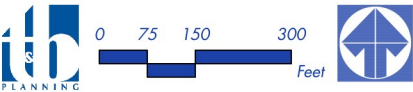


Figure 3-4



CONCEPTUAL MASTER DRAINAGE PLAN



fire suppression flows. As shown on Figure 3-5, *Conceptual Water Plan*, water service to the Project site would be provided via two points of connection to existing 16-inch water lines located within El Toro Road. The Project proposes a 20-inch water main within Nichols Road. A 12-inch water line would be constructed in “A” Street on-site to connect to the proposed 20-inch water main in Nichols Road. An additional 8-inch water line would be constructed in “B” Street on-site to connect to the existing 16-inch water main in El Toro Road. 8-inch water lines would be constructed in other local roadways on-site, creating a looped water system between the proposed 20-inch water line proposed in Nichols Road and the existing 16-inch line in El Toro Road.

F. Proposed Sewer Plan

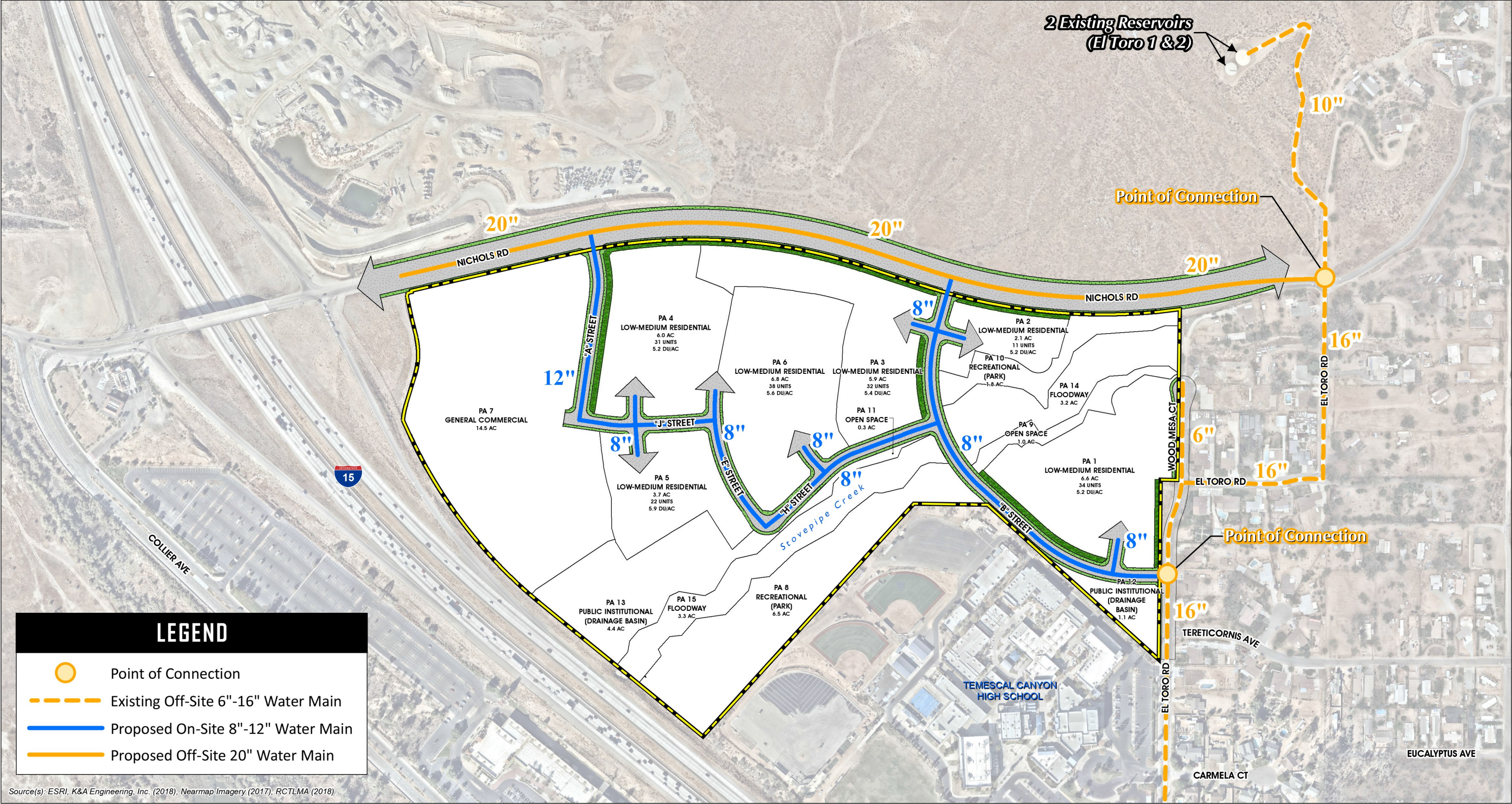
EVMWD also would provide sewer services to the Project site. Wastewater generated from the Project site would be treated by EVMWD at its Regional Water Reclamation Facility. The Project proposes two alternatives to provide service to the Project site. As shown on Figure 3-6, *Conceptual Sewer Plan (Option #1)*, the first alternative (Option #1) proposes to convey flows from the portions of the site north of Stovepipe Creek towards a proposed sewer lift station within the proposed commercial site in Planning Area 7 via 8-inch sewer lines. Flows would then be conveyed via a 4-inch force main within “J” Street, “E” Street, and “H” Street to “B” Street, where flows would be conveyed south to a proposed 8-inch gravity sewer within “B” Street, located near the southern boundary of Planning Area 1. Flows would then be combined with flows from Planning Area 1 and conveyed through an off-site 8-inch sewer line proposed in El Toro Road towards an existing 8-inch sewer main that conveys flows to the south.

As indicated on Figure 3-7, *Conceptual Sewer Plan (Option #2)*, under the second alternative (Option #2), sewer flows from the portions of the site located north of Stovepipe Creek would be conveyed via proposed 8-inch sewer mains towards the southwest corner of the proposed commercial site in Planning Area 7. A new 12-inch sewer main would be constructed beneath I-15 using jack and bore construction and would connect to an existing 12-inch sewer main that increases and becomes a 30-inch sewer main in Collier Avenue. Sewer flows from the portion of the site located south of Stovepipe Creek would be conveyed via proposed an 8-inch sewer main towards the southeast corner of the Project site. Flows would then be conveyed through an off-site 8-inch sewer main proposed in El Toro Road towards an existing 8-inch sewer main that conveys flows to the south through existing 12-inch sewer main. Flows from both Project locations would combine with existing flows and would be conveyed to an existing sewer lift station located in the southern portions of the existing outlet mall. Flows then would travel via an existing 10-inch force main to an existing 18-inch sewer main located within Collier Avenue, near the intersection of Riverside Drive and Collier Avenue.

All sewer flows from the Project site would be conveyed to the EVMWD Regional Water Reclamation Facility, located 1.4 miles south of the Project site.

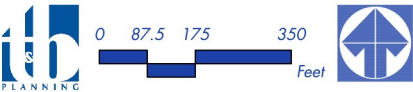
G. Open Space and Recreation Plan

As shown in Figure 3-8, *Open Space and Recreation Plan*, the recreational demands of future Project residents are planned to be met by a 6.5-acre linear park, which would be located in the southern portion of the Project site south of Stovepipe Creek, and a 1.8-acre neighborhood park, which would be located in the eastern portion



Source(s): ESRI, K&A Engineering, Inc. (2018), Nearmap Imagery (2017), RCTLMA (2018)

Figure 3-5



CONCEPTUAL WATER PLAN

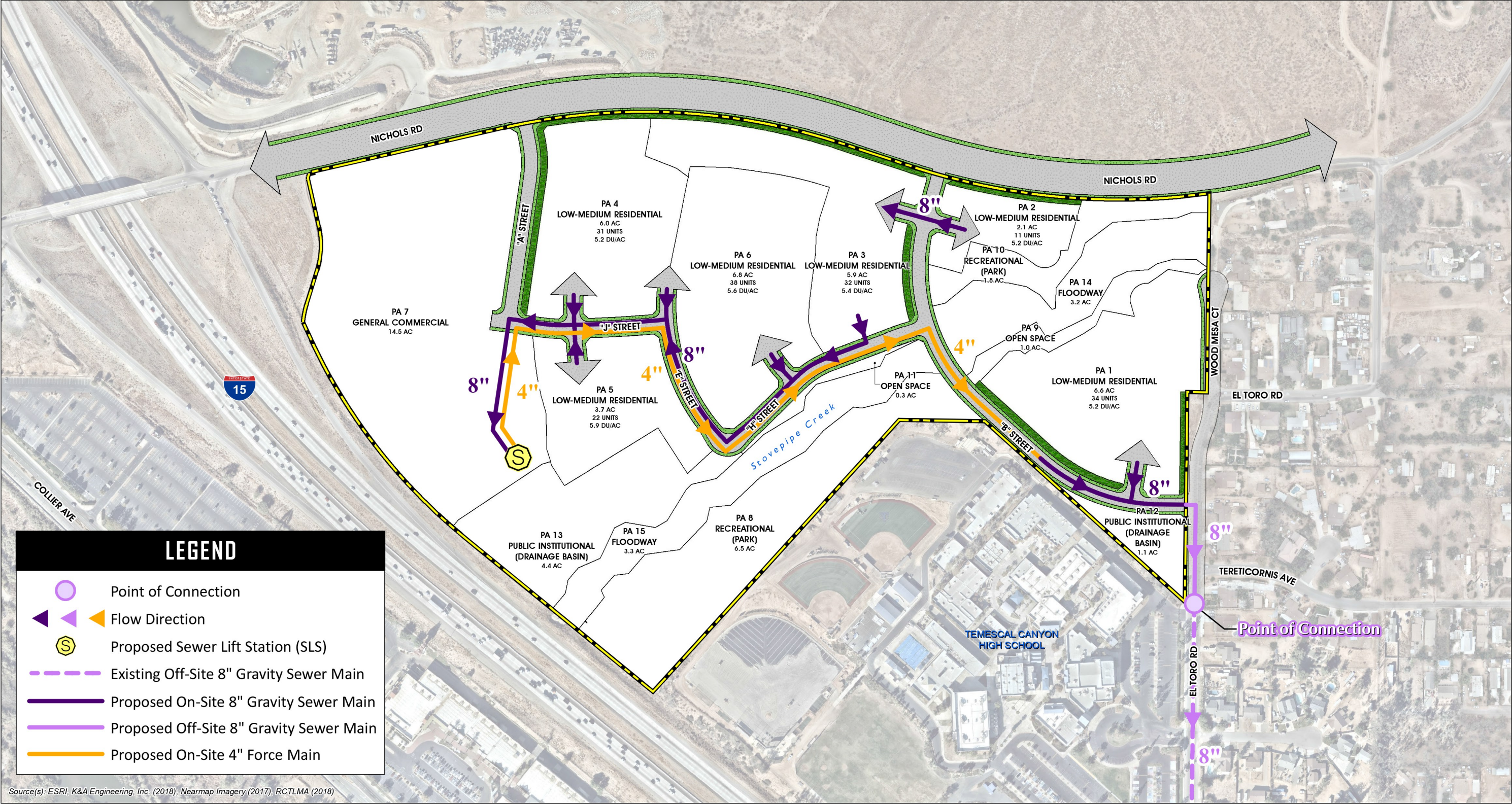
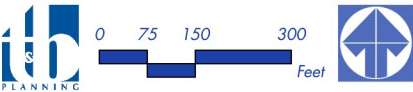


Figure 3-6



CONCEPTUAL SEWER PLAN (OPTION #1)

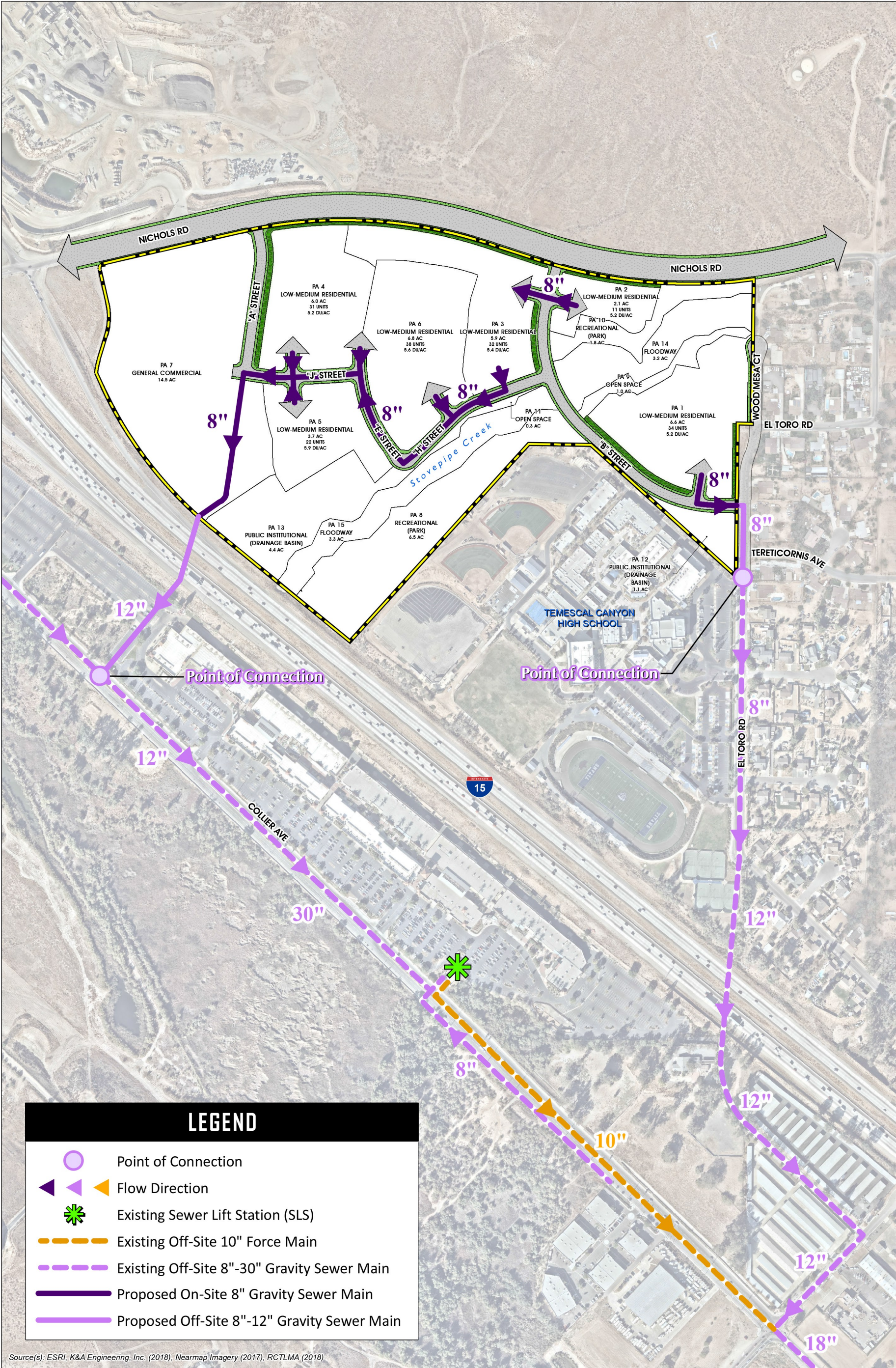


Figure 3-7

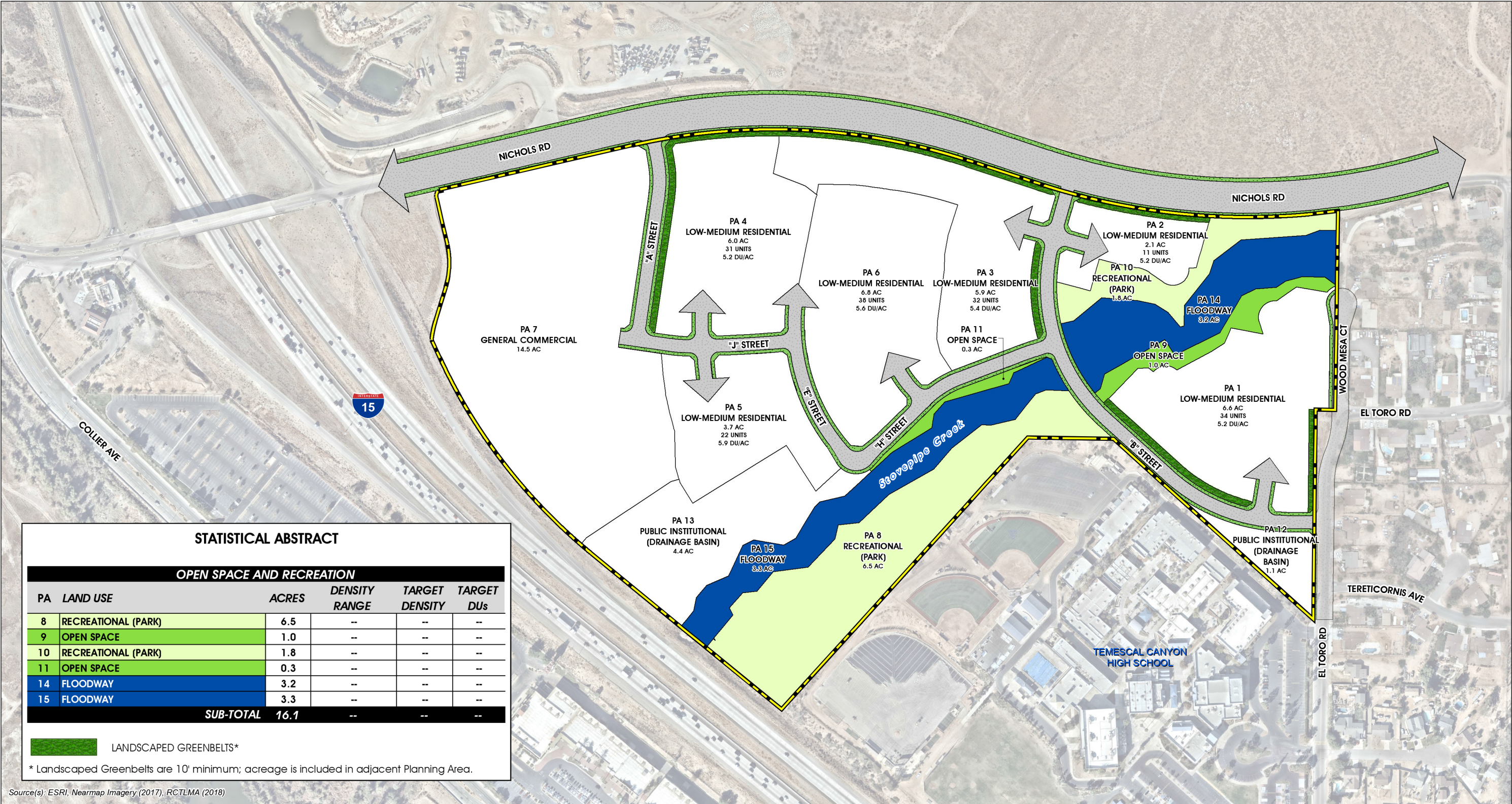
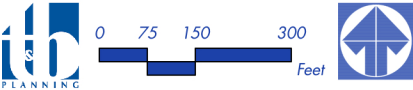


Figure 3-8



OPEN SPACE AND RECREATION PLAN



of the Project site north of Stovepipe Creek, which combined would encompass 8.3 acres of recreational uses. The proposed linear park would include passive uses such as trails and par-course fitness stations. The proposed neighborhood park would include passive recreation amenities such as a tot lot, seating areas, shaded structures, and open turf areas. The Project would provide 1.3 acres of open space which would serve to preserve and protect the natural riparian habitat and provide a buffer between Stovepipe Creek and the residential neighborhoods. Furthermore, 6.5 acres of floodway uses would be provided to preserve the natural riparian areas and drainage course of Stovepipe Creek, which traverses the Project site in a northeastern to northwestern direction. Stovepipe Creek would continue to be restricted from human access and use would remain undisturbed with implementation of the Project, with the exception of a single road crossing and the outlet facilities for the water drainage basin proposed within Planning Area 13.

I. Grading Plan

Figure 3-9, *Conceptual Grading Plan*, depicts the NRSP's proposed grading concept, which conceptually establishes the development pads, provides for appropriate site drainage, accommodates necessary utility infrastructure, and details cut and fill quantities. Grading of the Project site may occur in a single phase, or may occur in up to three phases. For more information regarding Project phasing, refer to Subsection 3.2.3.K, *Phasing Plan*, below. The proposed grading to implement the Project would require approximately 198,000 cubic yards (cy) of cut material and 217,000 cy of fill material, requiring the import of approximately 19,000 cy of earthwork material. Soil export materials would be imported from the Nichols North mining site, which is located directly north of the Project site, north of Nichols Road. All slopes are anticipated to have a maximum gradient of 2:1 (horizontal: vertical) or flatter.

J. Master Fire Protection Plan

As shown in Figure 3-10, *Conceptual Fire Protection Plan*, the NRSP includes a Master Fire Protection Plan. As noted in the City of Lake Elsinore General Plan, the southern half of the Project site is located within a "Very High" wildfire risk zone, and the northern half of the Project site is located within the "High" wildfire risk zone. Structures adjacent to open space areas and Stovepipe Creek would be required to provide sufficient "defensible space" between the dwelling and the fuel associated with the open land. A total of 100 feet of fuel modification treatment would be required on all lots abutting native vegetation. In those areas where 100 feet of fuel modification zones cannot be achieved due to open space protection issues or property boundary limitations, alternative protection measures would be implemented to help protect the homes from wildfire. As shown in Figure 3-10, three Fuel Modification Zones would be provided on the Project site, as described below:

- Zone 1 would be homeowner maintained within individual lots and is required to be free of all combustible construction and materials. Zone 1 is generally located within the rear yard and side yards of the homes within residential Planning Areas that are in close proximity to Stovepipe Creek.
- Zone 2 would be Homeowner's Association (HOA) maintained and consists of landscaping and manufactured slopes that would be irrigated and fire resistant. Zone 2 is generally located in landscaping areas outside of homeowner lots, starting from the lot parcel line extending outwards, parks, roadway landscaping, and manufactured slopes.

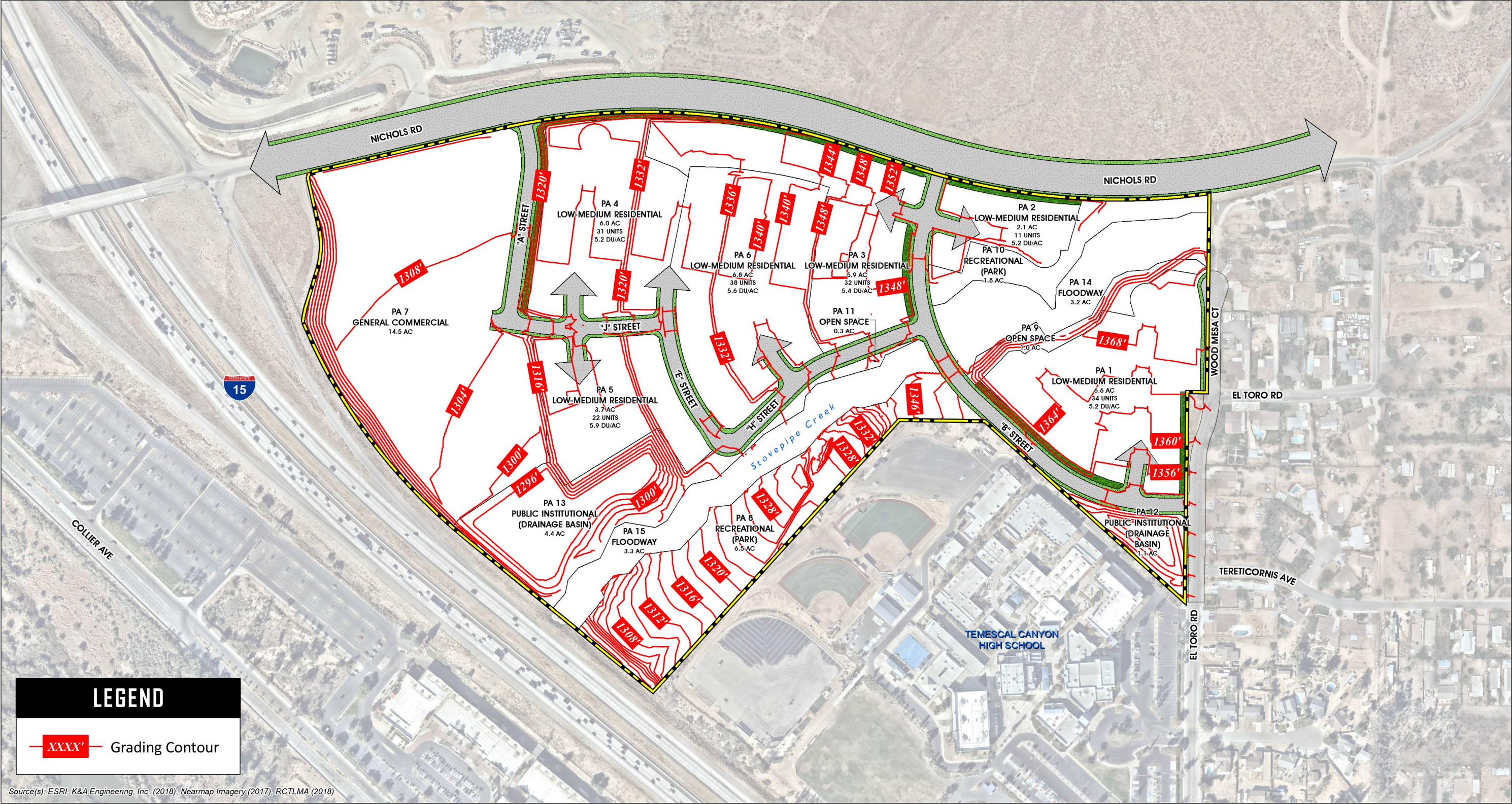
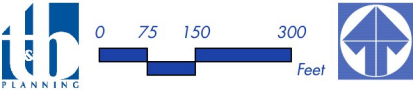


Figure 3-9



CONCEPTUAL GRADING PLAN

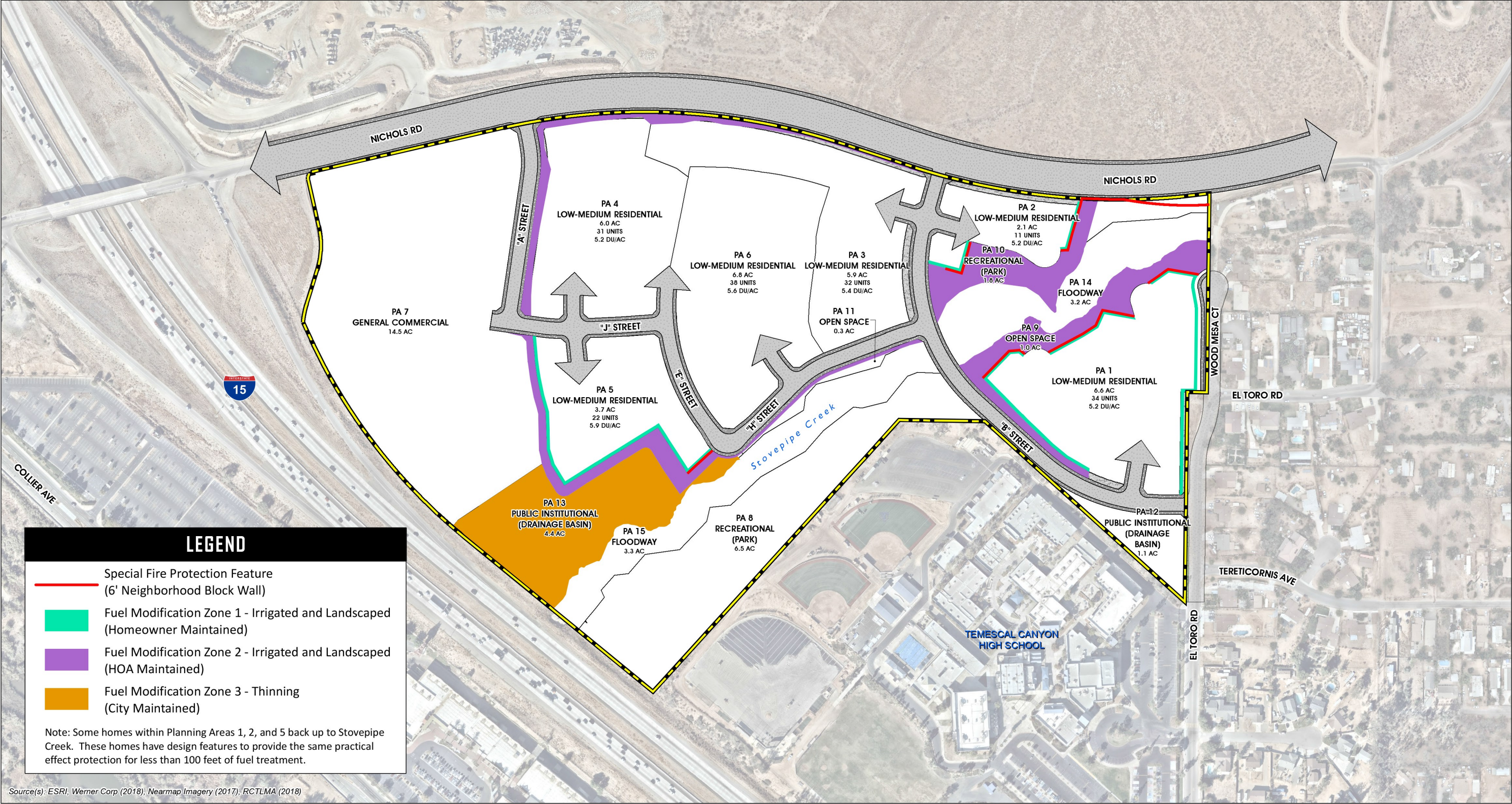
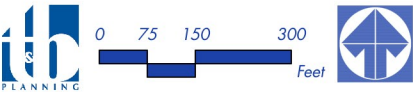


Figure 3-10



CONCEPTUAL FIRE PROTECTION PLAN



- Zone 3 would be City maintained and consists of thinning treatment to ensure that areas in Zone 3 are free of any dead and dying combustible vegetation. Zone 3 is generally located within the drainage basins and manufactured slopes within Planning Area 13. This zone is a non-irrigated area and must be maintained yearly prior to fire season to clear out any dead, dying, and invasive material.

In addition to the three Fuel Modification Zones, Special Fire Protection Features would be required for a few homes within residential Planning Areas 1, 2, and 5 because the homes in these areas would not meet the minimum 100-foot fuel treatment setback. For any home or building that is located less than 100 feet from Stovepipe Creek, six-foot neighborhood walls would be required to limit any actual radiant fire that may start in the creek area. In addition, no combustible landscaping would be permitted within five feet of the structure and no trees would be allowed on these residential lots.

K. Phasing Plan

Figure 3-11, *Conceptual Phasing Plan*, depicts the proposed phasing for the Project. For analytical evaluation in this EIR, the Project is assumed to be developed in three Phases, as follows:

- Phase 1 (2018): Construction of 34 single-family dwelling units;
- Phase 2 (2019): Construction of 134 single-family dwelling units, a 6.5-acre active park, a 1.8-acre passive park, and the sewer lift station (if required); and
- Phase 3 (2023): Construction of 14.5 acres of commercial uses.

Phasing may occur later than analytically assumed, out of the expected sequence, or in smaller increments, provided the required infrastructure and services are available at the time of development to provide adequate vehicular access and utility connections to the Project site. Circulation and infrastructure would be phased to provide the necessary infrastructure to and access to each proposed Planning Area. As noted in Subsection 3.2.3.0, phasing for grading may occur in a single phase or may occur in up to three phases. Sewer and water infrastructure would be phased in accordance with an agreement with the water and sewer purveyor or other capable service provider, which would state that the provision of service to any implementing project would be required prior to the recordation of any subdivision maps. The sewer lift station in Planning Area 7, if required, would be constructed as part of Phase 2.

L. Maintenance Plan

The NRSP includes a proposed Maintenance Plan, as shown in Table 3-2, *Maintenance Plan*. Areas including common open space, Stovepipe Creek, parks, landscaped parkways, and residential areas would be maintained by the HOA. Streets, drainage basins, and parks would be maintained by the City of Lake Elsinore. As shown, the Specific Plan identifies responsible parties for maintenance of each the facilities within the Specific Plan area.

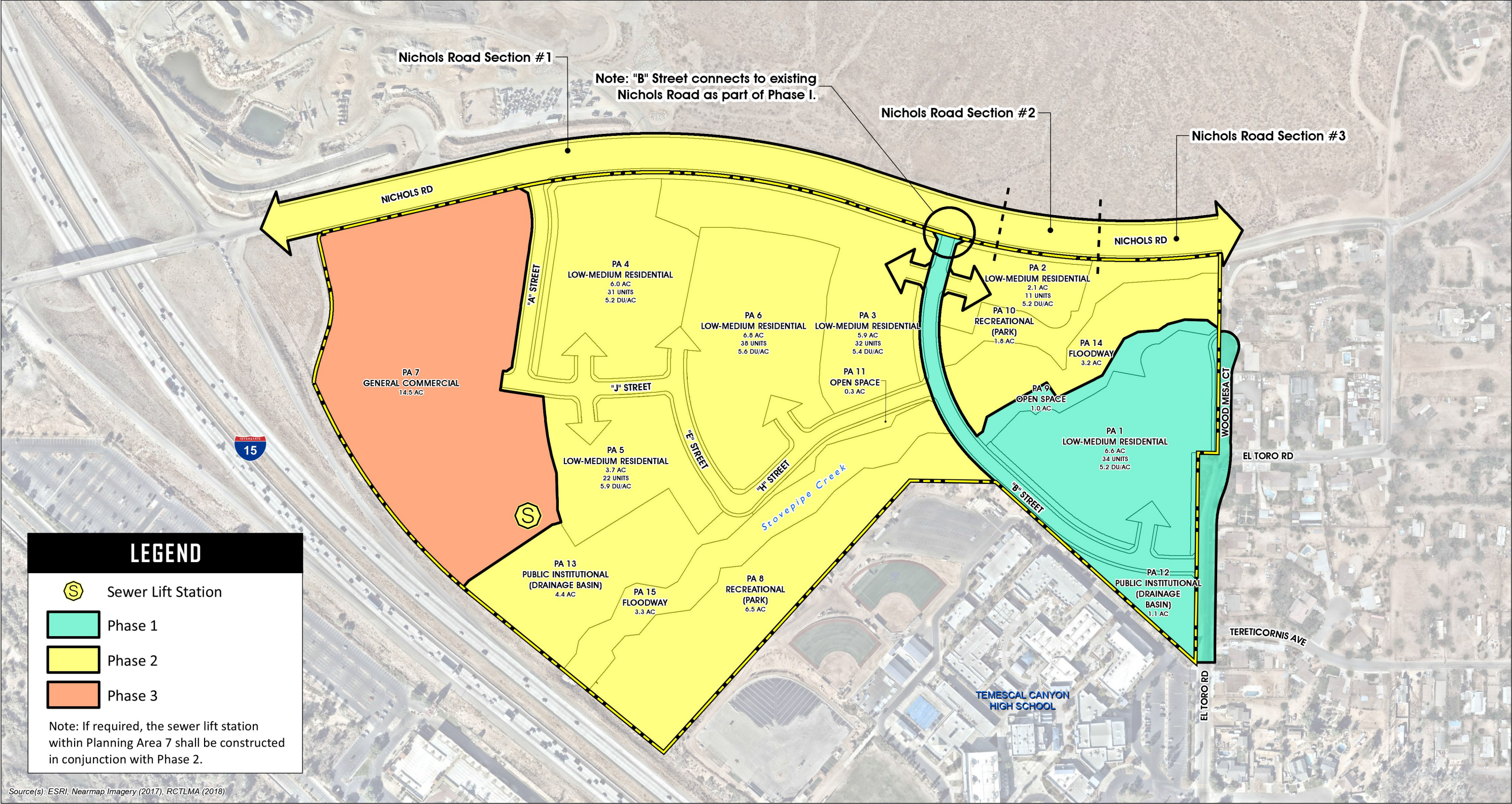
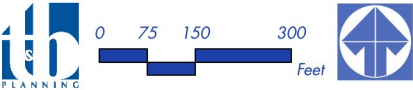


Figure 3-11



CONCEPTUAL PHASING PLAN



Table 3-2 Maintenance Plan

	HOMEOWNERS OR NEIGHBORHOOD ASSOCIATION	COMMERCIAL PROPERTY OWNERS ASSOCIATION	CSA, PUBLIC, OR QUASI- PUBLIC AGENCY	CITY OF LAKE ELSINORE	OTHER SERVICE ENTITY	COUNTY OF RIVERSIDE
Common Open Space (Including common area slopes)	✓					
Natural Open Space /Stovepipe Creek	✓					
Parks	✓			✓		
Landscaped Parkways – Within Public ROW	✓		✓	✓		
Landscaped Parkways – Within Local Roads	✓					
Monumentation and Hardscape Elements	✓					
Public Sewer/Water					✓	
Storm Drains/Drainage – Within Public ROW				✓		
Water Quality Management Facilities				✓		
Sidewalks – Within Public ROW			✓	✓		✓
Street Lighting			✓	✓		
Street Sweeping			✓			
Streets (Public)			✓	✓		✓
Private Driveways (within Commercial PA 7)		✓				
Manufactured Slopes	✓	✓		✓		
Fuel Modification Zones	✓	✓		✓		

(T&B Planning, 2018, Table II-3)

3.2.4 ZONE CHANGE No. 2018-01 (ZC No. 2018-01)

The City of Lake Elsinore Zoning Ordinance assigns a zoning classification to all properties inside the City's boundaries. Development is required by law to comply with the provisions of the City's Zoning Ordinance. Change of Zone No. 2018-01 (ZC No. 2018-01) proposes to modify the zoning designation on the southern 27.1 acres of the site from "Commercial Mixed Use (CMU)" to "Nichols Ranch Specific Plan." ZC No. 2018-01 also would change the zoning designation of the northern 45.4 acres of the site from "Alberhill Ranch Specific Plan" to "Nichols Ranch Specific Plan." ZC No. 2018-01 also would establish zoning boundaries on-site to reflect the NRSP land use plan for the 72.5-acre site. Additionally, ZC No. 2018-01 would establish allowable uses and development standards for the 72.5-acre NRSP area.



3.2.5 TENTATIVE TRACT MAP NO. 37305 (TTM No. 37305)

As shown on Figure 3-12, *Tentative Tract Map No. 37305*, and as summarized on Table 3-3, *Tentative Tract Map 37305 Land Use Summary*, Tentative Tract Map No. 37305 (TTM 37305) proposes to subdivide the approximately ± 72.50 -acre site to implement the land uses proposed by the NRSP. TTM 37305 would create 168 residential lots on approximately 22.74 acres; one commercial retail lot on 14.43 acres; a sewer lift station lot on 0.13 acre; a park site lot on 6.49 acres; two drainage basin lots on 5.45 acres; nine (9) landscape lots on 1.45 acres; three (3) open space/landscape lots on 3.04 acres; two (2) open space lots on 6.49 acres; and public streets (Streets A through J) on 12.28 acres. A detailed description of the various land uses that would result from the approval of TTM 37305 is provided below.

Table 3-3 Tentative Tract Map 37305 Land Use Summary

LAND USE	LOT NOS.	ACREAGE
Single Family Residential	1-168	22.74
Neighborhood Commercial	169	14.43
Park Site	171	6.49
Sewer Lift Station	170	0.13
Drainage Basins	A and B	5.45
Landscape Lots	C through K	1.45
Open Space/Landscape Lots	L through N	3.04
Open Space	O and P	6.49
Public Streets	N/A	12.28
TOTALS:	--	72.50

- **Single Family Residential.** TTM 37305 proposes to subdivide the property to provide a total of 168 single-family residential lots on 22.74 acres and would range in size from 4,549 s.f. to 9,801 s.f., with an average lot size of 5,896 s.f. Lots 1 through 60 and 152 through 168 (located within NRSP Planning Areas 1, 2, and 3) would range in size from 4,549 s.f. to 8,487 s.f. with an average lot size of 5,674 s.f. Lots 61 through 151 (located within NRSP Planning Areas 4, 5, and 6) would range in size from 5,000 s.f. to 9,801 s.f. with an average lot size of 6,084 s.f.
- **Neighborhood Commercial.** TTM 37305 proposes one commercial lot (Lot 169) in the western portion of the site on 14.43 acres and is intended to implement Planning Area 7 of the NRSP. As proposed by the NRSP, the commercial lot is intended to accommodate a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses.
- **Park Site.** TTM 37305 proposes one lot for recreation purposes on 6.49 acres in the southern portion of the site along the southern edge of Stovepipe Creek. This lot would implement Planning Area 8 of the NRSP.

TENTATIVE TRACT MAP NO. 37305

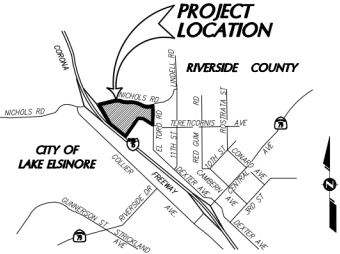
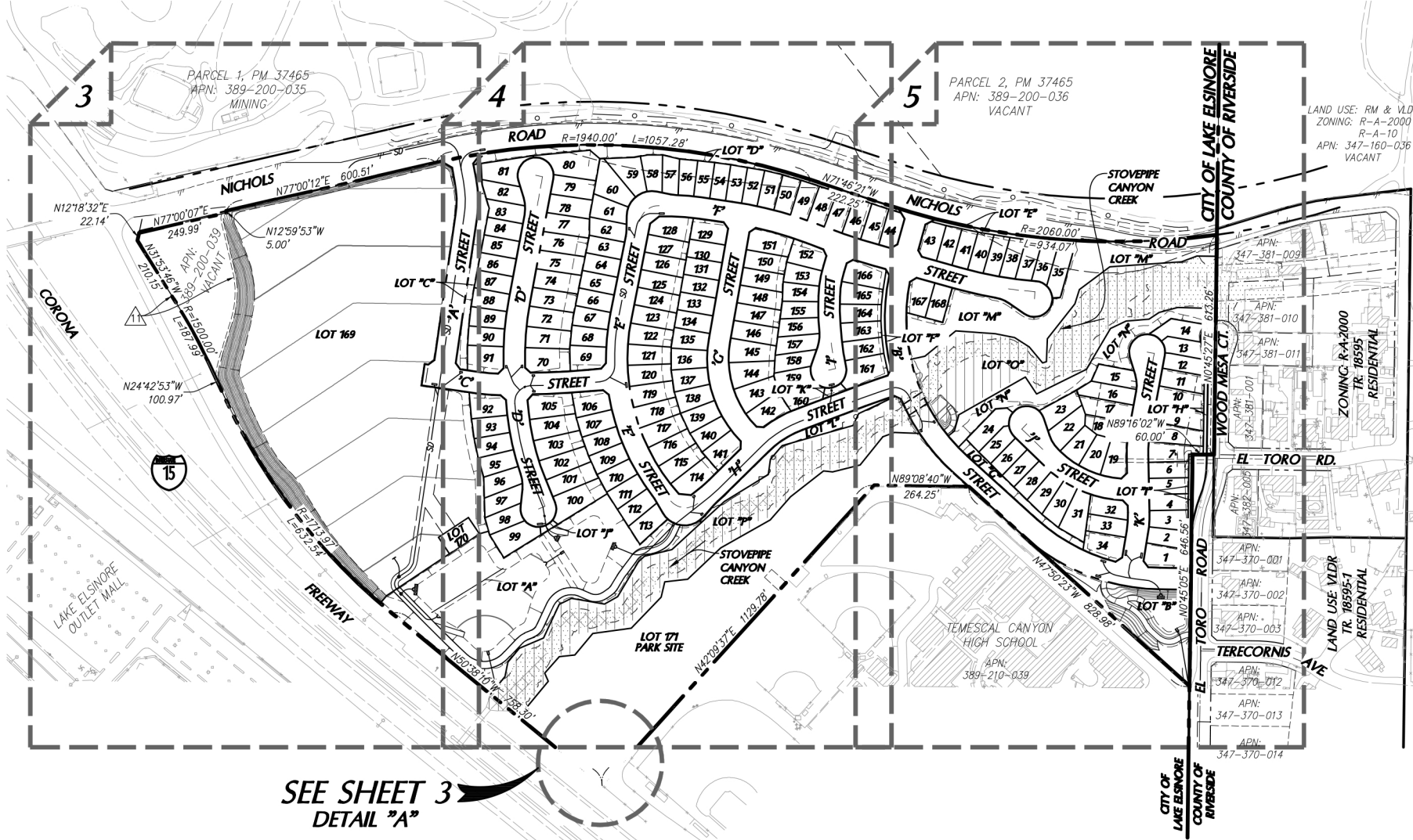
IN THE CITY OF LAKE ELSINORE

EASEMENT NOTES:

- EASEMENT(S) FOR DITCHES AND PIPELINES, IN FAVOR OF THE TEMESCAL WATER COMPANY, RECORDED ON AUGUST 9, 1895 PER A DOCUMENT RECORDED IN BOOK 33, PAGE 364 OF DEEDS.
- NOT PLOTTED - INDETERMINATE FROM RECORD.
- AGREEMENT TO ESTABLISH COVENANTS AND EQUITABLE SERVITUDES BETWEEN ADJOINING LANDOWNERS, PER A DOCUMENT RECORDED ON DECEMBER 21, 1981 AS INSTRUMENT NO. 224928 OF OFFICIAL RECORDS.
- NOT PLOTTED - INDETERMINATE FROM RECORD.
- AN IRREVOCABLE OFFER TO DEDICATE AN EASEMENT FOR DRAINAGE AND SLOPE PURPOSES, IN FAVOR OF THE CITY OF LAKE ELSINORE, RECORDED ON JANUARY 11, 1983, PER INSTRUMENT NO. 5623 OF OFFICIAL RECORDS.
- RESERVATION OF EASEMENTS AND RIGHTS NECESSARY TO MAINTAIN, OPERATE, REPLACE, REMOVE, OR REVIEW IN-PLACE PUBLIC UTILITY FACILITIES, RECORDED ON FEBRUARY 6, 2013 PER THE VACATION OF A PORTION OF NICHOLS ROAD RECORDED AS INSTRUMENT NO. 2013-00657 OF OFFICIAL RECORDS.
- TO BE VACATED / ABANDONED PER PARCEL MAP 37465.
- EASEMENT FOR PUBLIC RIGHTS OF WAY AND PUBLIC UTILITY PURPOSES, IN FAVOR OF THE CITY OF LAKE ELSINORE, RECORDED ON DECEMBER 31, 1968 PER INSTRUMENT NO. 2013-0109930 OF OFFICIAL RECORDS.
- EASEMENT FOR FUTURE CALTRANS WIDENING / IN FAVOR OF THE CITY OF LAKE ELSINORE, RECORDED ON DECEMBER 20, 2013 PER INSTRUMENT NO. 2013-0589006.
- EASEMENT FOR POLE LINES AND / OR CONDUITS, IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY, RECORDED ON MARCH 6, 1968 PER INSTRUMENT NO. 127459 OF OFFICIAL RECORDS.
- EASEMENT FOR ROAD AND UTILITY PURPOSES, IN FAVOR OF MARY ELIZABETH CUMMINGS, RECORDED ON NOVEMBER 16, 1966 PER INSTRUMENT NO. 111314 OF OFFICIAL RECORDS.
- EASEMENT FOR PUBLIC ROAD PURPOSES PER PARCEL MAP NO. 37465. THIS EASEMENT IS TO BE VACATED BY THE CITY OF LAKE ELSINORE, INCLUDING ANY UTILITY RIGHTS, UPON COMPLETION OF THE NEW NICHOLS ROAD IMPROVEMENTS REQUIRED PER TTM 37305.

LEGEND/ABBREVIATIONS

A.C.	ASPHALT CONCRETE	CENTERLINE
AC, AC.	ACRE	PROPERTY LINE
A.B.	AGGREGATE BASE	RIGHT OF WAY
BC	BEGIN OF CURVE	PROPOSED LOTLINE
CB	CATCH BASIN	PROPOSED WATER
C/L, CL, E	CENTER LINE	PROPOSED STORM DRAIN
C&G	CURB AND GUTTER	PROPOSED SEWER
CT	CURB	PROPOSED RECYCLE WATER
D/L	DAYLIGHT	STREET GRADE & FLOW DIRECTION
DWY	DRIVEWAY	PROPOSED CONTOUR
E.A., EA	EACH	TOP OF SLOPE
EC	END OF CURVE	TOE OF SLOPE
EP	END OF PAVEMENT	
ES	EXISTING GROUND	
EX, EXIST.	EXISTING	
FH	FIRE HYDRANT	PROPOSED RETAINING WALL
FS	FINISH GRADE	PROPOSED STREET LIGHT
FL	FLOWLINE	PROPOSED FIRE HYDRANT
FM	FORCE MAIN	
FS	FINISHED SURFACE	
GB	GRADE BREAK	DAYLIGHT LINE
HP	HIGH POINT	
L.F., LF	LINEAL FEET	PAD LIMIT LINES
LN	LANE	DIRECTION OF FLOW
LP	LOW POINT	
LS	LANDSCAPE	LOT NUMBER
MAX	MAXIMUM	LETTERED LOT
MN	MANHOLE	
MH	MANHOLE	
N.A.P.	NOT-A-PART	PAD ELEVATION
NTS	NOT TO SCALE	
P/L	PROPERTY LINE	SHEET NUMBER
PROP.	PROPOSED	
R/W, RW	RIGHT OF WAY	
R	RADIUS	PROPOSED 100 YEAR FEMA FLOODPLAIN
SE	SOUTHERN CALIFORNIA EDISON	
SD	STORM DRAIN	WATERS OF THE STATE (CDFW JURISDICTION)
S	SEWER	
SM	SIMILAR	WATERS OF THE US (ACOE JURISDICTION)
SF, S.F.	SQUARE FEET	PROP. ROCK (RIP-RAP)
SW	SIDEWALK	CHANNEL OR RETENTION
TC	TOP OF CURB	
TYP.	TYPICAL	
VC	VERTICAL CURVE	
W	WATER	



VICINITY MAP

NOT TO SCALE

THOMAS GUIDE, PAGE 836, GRID B7, 2006
SAN BERNARDINO & RIVERSIDE COUNTY EDITION

GENERAL NOTES

- ASSESSORS' PARCEL NUMBERS: 389-200-038, 389-200-039, 389-210-008, 389-210-032, 389-210-034, 389-210-036, & PORTIONS OF CURRENT APNS: 289-200-035 & 289-200-036
- APPROXIMATE AREA
GROSS = 73.97 ACRES
NET = 72.50 ACRES
EXCLUDES CALTRANS WIDENING EASEMENT
- EXISTING GENERAL PLAN DESIGNATION: SPECIFIC PLAN (SP) - ALBERHILL RANCH AND GENERAL COMMERCIAL (GC)
- PROPOSED GENERAL PLAN DESIGNATION: SPECIFIC PLAN (SP) - NICHOLS SOUTH
- EXISTING ZONING: SPECIFIC PLAN (SP) - ALBERHILL RANCH AND COMMERCIAL MIXED USE (CMU)
- PROPOSED ZONING: SPECIFIC PLAN (SP) - NICHOLS SOUTH
- TOTAL LOTS:
SINGLE FAMILY: 168 LOTS
COMMERCIAL: 168 LOTS
SEWER LIFT STATION: 1 LOT
PARK SITE: 1 LOT
PUBLIC STREETS (A-J): 10 LOTS
LETTERED LOTS (SEE TABLE ON SHEET 2): 16 LOTS
- RESIDENTIAL LOT SIZE DATA
AVERAGE LOT SIZE = 5,896 SF
MINIMUM LOT SIZE = 4,549 SF
MAXIMUM LOT SIZE = 9,468 SF
- PROPOSED GROSS DENSITY: RESIDENTIAL: 168 DU / 38.20 AC = 4.64 DU/AC
- EXISTING LAND USE: VACANT
- ADJACENT LAND USES:
WEST: FREEWAY (INTERSTATE 15)
SOUTH: TEMESCAL CANYON HIGH SCHOOL
EAST: EXISTING RESIDENTIAL
NORTH: MINING AND VACANT
- PROPOSED USES:
RESIDENTIAL: 168 LOTS
COMMERCIAL: 168 LOTS
SEWER LIFT STATION: 1 LOT
PARK SITE: 1 LOT
LANDSCAPE LOTS (MAINT. BY HOA): 10 LOTS
OPEN SPACE/LS LOT: 1 LOT
OPEN SPACE: 1 LOT
- PUBLIC STREETS: ALL STREETS SHOWN HEREON SHALL BE PUBLIC STREETS.
- OPEN SPACE LOTS: ALL OPEN SPACE LOTS SHALL BE MAINTAINED BY THE H.O.A.
- BUILDING SETBACKS: PER NICHOLS SOUTH SPECIFIC PLAN
- THOMAS GUIDE: PAGE 836, GRIDS B-7 & C-7, 2007 SAN BERNARDINO & RIVERSIDE EDITION
- GEOLOGICAL HAZARDS: PER THE SOILS REPORT BY CHU/TERRACON THERE ARE NOT ACTIVE FAULTS WITHIN THE SITE AND THE SITE IS NOT SUBJECT TO LIQUEFACTION OR OTHER GEOLOGICAL HAZARDS.
- FLOODPLAIN: PORTIONS OF THE SITE ARE WITHIN A MAPPED FLOOD PLAIN - ZONE "A" PER FEMA FIRM PANEL 202B OF 3808. MAP NO. 08050208C. A CLAMP AND A CLAMP WILL BE REQUIRED WITH THIS DEVELOPMENT TO RE-ESTABLISH THE LIMITS OF THIS FLOODPLAIN FOR STOVEPIPE CANYON CREEK TO MATCH EXISTING AND PROPOSED CONDITIONS
- PHASING: THREE FINAL MAPS ARE PROPOSED

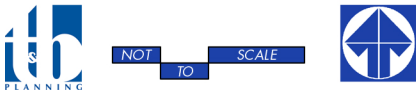
LEGAL DESCRIPTION

BEING A SUBDIVISION OF PARCELS 3 AND PARCEL 4 OF PARCEL MAP NO. 37465 IN THE CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

PUBLIC UTILITIES / SERVICES

SCHOOL DISTRICT:	LAKE ELSINORE UNIFIED SCHOOL DISTRICT (951) 283-7000
ELECTRIC:	SOUTHERN CALIFORNIA EDISON COMPANY (800) 655-4555
GAS:	SOUTHERN CALIFORNIA GAS COMPANY (800) 427-2200
WATER & SEWER:	ELSNORE VALLEY MUNICIPAL WATER DISTRICT (951) 674-3146
TELEPHONE:	VERIZON (800) 483-3000

Source(s): K&A Engineering, Inc. (03-05-2018)



Lead Agency: City of Lake Elsinore

Figure 3-12

TENTATIVE TRACT MAP NO. 37305



- **Drainage Basins.** TTM 37305 proposes two (2) lots for drainage basins on-site on a total of 5.45 acres, which would implement Planning Areas 12 and 13 of the NRSP. The drainage basin on Lot A would encompass 4.38 acres and would implement Planning Area 13 of the NRSP in the southwest portion of the site. The drainage basin on Lot B would encompass 1.07 acres and would implement Planning Area 12 of the NRSP in the southeastern portion of the site.
- **Landscape Lots.** TTM 37305 proposes nine (9) lots (Lots C through K) for common area landscaping on 1.45 acres
- **Open Space/Landscape Lots.** TTM 37305 proposes three (3) lots (Lots L through N) for open space and landscaping on 3.04 acres.
- **Open Space.** TTM 37305 proposes two (2) lots (Lots O and P) for open space uses on 6.49 acres.
- **On-Site Public Roadways.** TTM 37305 proposes a total of ten (10) public streets on 12.28 acres (Streets A through J).

TTM 37305 also identifies cross-sections for Nichols Road as well as internal roadways and identifies the improvements that would be constructed as part of the Project. These circulation improvements include the realignment and construction of a segment of Nichols Road (off-site) along the Project's frontage, construction of the western half of Wood Mesa Court (on-site), a bridge over Stovepipe Creek (on-site), and on-site local roadways (refer to Subsection 3.2.3C for a detailed description of roadway improvements proposed by the Project). TTM 37305 also would allow for the installation of on-site infrastructure improvements, such as water, sewer, and storm drain lines.

3.3 PROJECT CONSTRUCTION AND OPERATIONAL CHARACTERISTICS

3.3.1 CONSTRUCTION DETAILS

A. Proposed Physical Disturbances

Physical disturbances needed to implement the proposed Project are depicted on Figure 3-13, *Proposed Physical Disturbances*. As shown, the Project proposes to grade a total area of 73.8 acres, with the area of on-site grading totaling 66.0 acres, and the area of off-site grading totaling 7.8 acres. Off-site grading would include proposed frontage improvements, realignment of Nichols Road, and installation of a 20-inch water line within Nichols Road. In addition to the 7.8 acres of off-site grading, the Project may require off-site improvements for sewer connections, which would require additional off-site grading. If sewer plan Option #1 (shown in Figure 3-6) is selected, the Project would require off-site grading along a segment of El Toro Road to provide a sewer connection to the Project site. If sewer plan Option #2 (shown in Figure 3-7) is selected, the Project would require off-site grading along a segment of El Toro Road and from the Project site under I-15 to a point of connection in Collier Avenue. In addition to the 73.8 acres (which does not include potential off-site sewer grading disturbances) of on- and off-site grading disturbances, fuel modification areas planned by the Project would impact an additional 0.8 acre on-site. No other on- or off-site physical impacts are anticipated from Project implementation.

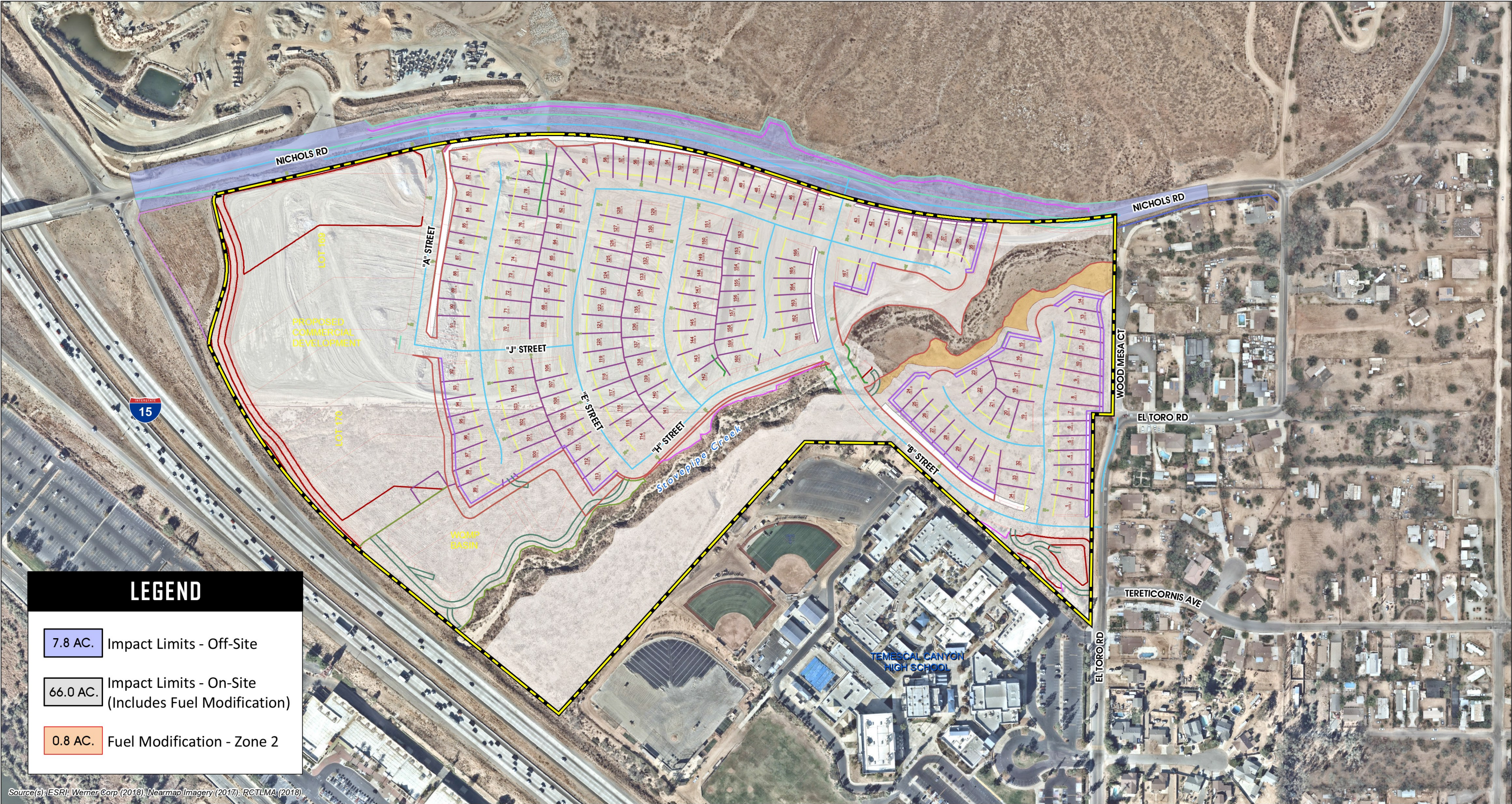
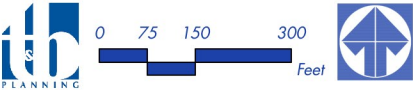


Figure 3-13





B. Anticipated Construction Schedule

The proposed Project would be developed in three phases, as previously depicted on Figure 3-11. Construction would begin with site preparation and grading on-site. It is anticipated for purposes of analysis within this EIR that construction of the residential portion of the Project would take approximately two years, with construction commencing in 2019 for Phase 1 and in 2020 for Phase 2. Construction of the commercial site (Phase 3) is expected to commence in 2021. Phase 1 would be occupied in 2020, Phase 2 would be occupied in 2021, and Phase 3 would be occupied in 2024. If construction commences later than analytically assumed by this EIR, impacts to the environment associated with construction equipment would be less than assumed herein, because of the phase out of older, more polluting construction equipment and replacement by newer and less polluting pieces of equipment. As noted previously in Subsection 3.2.3.I, grading would require approximately 198,000 cy of cut material and 217,000 cy of fill material, requiring the import of approximately 19,000 cy of earthwork material. Table 3-4, *Project Construction Schedule*, shows the construction schedule and durations assumed in this EIR, and Table 3-5, *Construction Equipment Assumptions*, presents the construction equipment assumptions utilized in this EIR.

3.3.2 OPERATIONAL CHARACTERISTICS

The proposed Project would be operated as a residential community, and as a neighborhood commercial center. As such, typical operational characteristics include residents and visitors traveling to and from the residential portion of the site, customers and vendors traveling to and from the commercial area of the site, visitors traveling to and from the hotel use on-site, leisure and maintenance activities occurring on individual residential lots and in the on-site recreation areas, and general maintenance of common areas. Low levels of noise and a moderate level of artificial exterior lighting typical of a mixed-use community is expected.

A. Future Population

Implementation of the proposed Project would result in the construction of 168 single-family homes. According to the United States Census Bureau, single-family uses within the City of Lake Elsinore generate approximately 3.74 persons per dwelling unit. Accordingly, the Project would result in an estimated future population of 628 residents (168 dwelling units x 3.74 persons per household = 628 future residents). An additional transient population also would result from the proposed hotel uses. (USCB, 2016)

B. Future Employment

Implementation of the proposed Project would result in the construction of a neighborhood commercial center on approximately 14.5 acres of the Project site, which would include a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses. Based on the Southern California Association of Government's (SCAG) Employment Density Study Summary Report, the employment density for other retail/service uses is 21.98 employees per acre. Thus, the 14.5 acres of commercial retail uses proposed by the Project would result in approximately 319 employees (14.5 acres x 21.98 jobs per acre = 319 jobs). (SCAG, 2001, Table 2A)



Table 3-4 Project Construction Schedule

Phase Name	Start Date	End Date	Days
Site Preparation and Grading			
Site Preparation	06/03/2019	07/26/2019	40
Mass Grading	07/27/2019	12/27/2019	110
Phase 1			
Fine Grading	12/28/2019	01/24/2020	20
Building Construction	12/28/2019	11/13/2020	230
Paving	10/18/2020	11/13/2020	20
Architectural Coating	10/18/2020	12/11/2020	40
Phase 2			
Fine Grading	06/01/2020	06/26/2020	20
Building Construction	06/01/2020	12/10/2021	400
Paving	09/26/2021	11/12/2021	35
Architectural Coating	09/26/2021	12/31/2021	70
Phase 3			
Fine Grading	12/09/2021	01/05/2022	20
Building Construction	12/09/2021	11/08/2023	500
Paving	08/20/2023	11/12/2021	50
Architectural Coating	08/20/2023	01/05/2024	100

(Urban Crossroads, 2018a, Table 3-2)



Table 3-5 Construction Equipment Assumptions

Activity	Equipment	Number	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Mass Grading and Fine Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Paving Equipment	2	8
	Rollers	2	8
	Pavers	2	8
Architectural Coating	Air Compressors	1	8

(Urban Crossroads, 2018a, Table 3-3)

C. Future Traffic

Based on a Project-specific Traffic Impact Analysis conducted by Urban Crossroads, Inc. (*Technical Appendix L*), and as discussed in Subsection 4.15, *Transportation and Traffic*, to this EIR, Phase 1 of the proposed Project, which includes the construction of 34 dwelling units, would generate 321 net daily trip-ends, with 26 vehicles per hour (VPH) in the AM peak hour and 35 VPH in the PM peak hour. Phase 2 of the Project, which includes 168 dwelling units and a park site, would generate 1,593 net daily trip-ends, with 128 VPH in the AM peak hour and 169 VPH in the PM peak hour. Buildout of the Project, including 168 dwelling units, a park site, and commercial uses [including a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, an 8,000 s.f. health and fitness club, a gas station (including market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses], would result in a total of approximately 6,901 net daily trip-ends, with 734 VPH in the AM peak hour and 622 VPH in the PM peak hour. (Urban Crossroads, 2018d, Table 4-2)

D. Water Demand

Based on Table 3-14, *Land Use Classifications and Acreages*, of the EVMWD Water System Master Plan, residential and recreational uses result in a demand for 2,300 gallons per day per acre (gpd/ac) of water while



commercial uses result in a demand for 1,800 gpd/ac. Accordingly, the estimated demand for water for the Project's 31.1 acres of residential uses, 14.5 acres of commercial uses, and 8.3 acres of recreational uses is equal to approximately 116,720 US gallons per day [(31.1 ac of residential uses x 2,300 gpd/ac = 71,530 gpd)+(14.5 ac of commercial uses x 1,800 gpd/ac = 26,100 gpd)+(8.3 ac of recreational uses x 2,300 gpd/ac = 19,090 gpd) = a total of 116,720 gpd]. (EVMWD, 2016a, Table 3-14)

E. Wastewater Demand

Based on Table 4-8, *Calibrated Wastewater Duty and Generation Factors*, of the EVMWD Sewer System Master Plan, residential uses generate 778 gpd/ac of wastewater while commercial uses result in a demand for 994 gpd/ac, and recreational uses generate 101 gpd/ac. Accordingly, the estimated generation of wastewater for the Project's 31.1 acres of residential uses, 14.5 acres of commercial uses, and 8.3 acres of recreational uses is equal to approximately 39,447 US gallons per day [(31.1 ac of residential uses x 778 gpd/ac = 24,196 gpd) + (14.5 ac of commercial uses x 994 gpd/ac = 14,413 gpd) + (8.3 ac of recreational uses x 101 gpd/ac = 838 gpd) = a total of 39,447 gpd]. (EVMWD, 2016b, Table 4-8)

3.4 SUMMARY OF REQUESTED ACTIONS

The City of Lake Elsinore has primary approval responsibility for the proposed Project. As such, the City serves as the Lead Agency for this EIR pursuant to CEQA Guidelines § 15050. Accordingly, the City's Planning Commission will hold a public hearing to consider the Final EIR, the Project's General Plan Amendment, Specific Plan, Specific Plan Amendment, Zone Change, and Tentative Tract Map applications. The Planning Commission will make advisory recommendations to the City Council on whether to approve, approve with changes, or deny the proposed General Plan Amendment, Specific Plan, Specific Plan Amendment, Zone Change, and Tentative Tract Map applications. The City Council will consider the information contained in the Final EIR and this EIR's Administrative Record in its decision-making processes and will approve or deny the General Plan Amendment, Specific Plan, Specific Plan Amendment, Zone Change, and Tentative Tract Map applications. Upon approval or conditional approval of the above-described Project actions and upon certification of the Final EIR by the City Council, the City would conduct administrative reviews and grant subsequent permits and approvals to implement Project requirements and conditions of approval. A list of the primary actions under City jurisdiction is provided in Table 3-6, *Matrix of Project Approvals/Permits*.

3.5 RELATED ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS

Subsequent to approval of General Plan Amendment No. 2018-01, Specific Plan No. 2018-01, Specific Plan Amendment No. 2017-03, Zone Change No. 2018-01, and a Tentative Tract Map No. 37305, additional discretionary and ministerial actions may be necessary to implement the proposed Project. These include, but are not limited to, individual plot plans and/or conditional use permits, grading permits, encroachment permits/road improvements, drainage infrastructure improvements, water and sewer infrastructure improvements, storm water permit(s) (National Pollutant Discharge Elimination System [NPDES]), a Section 1602 Streambed Alteration Agreement, Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements, Federal Emergency Management Agency (FEMA) Conditional Letter of Map Revision, and FEMA Letter of Map Revision. Table 3-6 provides a summary of the agencies responsible for subsequent



discretionary approvals associated with the Project. The required EIR will cover all federal, state, and local government approvals which may be needed to construct or implement the Project, whether explicitly noted in Table 3-6 or not (CEQA Guidelines § 15124[d]).

Table 3-6 Matrix of Project Approvals/Permits

PUBLIC AGENCY		APPROVALS AND DECISIONS
CITY OF LAKE ELSINORE		
City of Lake Elsinore Discretionary Approvals		
City of Lake Elsinore Planning Commission		<ul style="list-style-type: none"> • Provide recommendations to the City of Lake Elsinore City Council regarding certification of the Project's EIR. • Provide recommendations to the City of Lake Elsinore City Council whether to approve General Plan Amendment (GPA No. 2018-01), Nichols Ranch Specific Plan (SP No. 2018-01), Alberhill Ranch Specific Plan Amendment (SPA No. 2017-03), Zone Change (ZC No. 2018-01), and a Tentative Tract Map (TTM No. 37305).
City of Lake Elsinore City Council		<ul style="list-style-type: none"> • Reject or certify this EIR along with appropriate CEQA Findings. • Approve, conditionally approve, or deny the proposed whether to approve General Plan Amendment (GPA No. 2018-01), Zone Change (ZC No. 2018-01), and a Tentative Tract Map (TTM No. 37305). • Approve by Ordinance or deny Nichols Ranch Specific Plan 2018-01, Alberhill Ranch and Alberhill Ranch Specific Plan Amendment (SPA No. 2017-03).
City of Lake Elsinore Subsequent Discretionary and Ministerial Approvals		
City of Lake Elsinore Community Development Department		<ul style="list-style-type: none"> • Approve additional Tract Maps, as well as Final Maps, Design Reviews, and/or Site Plans as may be appropriate. • Issue Grading Permits. • Issue Building Permits. • Approve Road Improvement Plans. • Issue Encroachment Permits. • Issue Conditional Use Permits, if required.
OTHER AGENCIES-SUBSEQUENT APPROVALS AND PERMITS		
California Department of Fish and Wildlife (CDFW)		<ul style="list-style-type: none"> • Issuance of a Section 1602 Streambed Alteration Agreement (SAA)
Caltrans		<ul style="list-style-type: none"> • Encroachment permit(s) (if work within Caltrans right-of-way is required)
Santa Ana Regional Water Quality Control Board (RWQCB)		<ul style="list-style-type: none"> • Issuance of a Construction Activity General Construction Permit. • Compliance with National Pollutant Discharge Elimination System (NPDES) Permit. Waste Discharge Requirements
Riverside County Flood Control & Water Conservation District (RCFCWCD)		<ul style="list-style-type: none"> • Approvals for construction of drainage basins.
Elsinore Valley Municipal Water District (EVMWD)		<ul style="list-style-type: none"> • Approval of water and sewer improvements
Federal Emergency Management Agency (FEMA)		<ul style="list-style-type: none"> • Issuance of a Conditional Letter of Map Revision • Issuance of a Letter of Map Revision



4.0 ENVIRONMENTAL ANALYSIS

4.0.1 SUMMARY OF EIR SCOPE

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

In compliance with the procedural requirements of CEQA, an Initial Study was prepared to determine the scope of environmental analysis for this EIR. Public comment on the scope consisted of written comments received by the City of Lake Elsinore in response to the Notice of Preparation (NOP) issued for this EIR. An EIR scoping meeting also was held on June 14, 2018 at the Lake Elsinore Cultural Arts Center, located at 183 North Main Street, Lake Elsinore, CA 92530; however, no members of the public attended the scoping meeting. Taking all known information and public comments into consideration, 18 primary environmental subject areas are evaluated in this Section 4.0, as listed below. Each subsection evaluates several specific subject matters related to the general topic of the subsection. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

4.1	Aesthetics	4.10	Land Use and Planning
4.2	Air Quality	4.11	Noise
4.3	Biological Resources	4.12	Paleontological Resources
4.4	Energy	4.13	Population and Housing
4.5	Geology and Soils	4.14	Public Services
4.6	Greenhouse Gas Emissions	4.15	Recreation
4.7	Hazards and Hazardous Materials	4.16	Transportation and Traffic
4.8	Historic and Archeological Resources	4.17	Tribal Cultural Resources
4.9	Hydrology and Water Quality	4.18	Utilities and Service Systems

Two (2) environmental subjects, Agriculture/Forest Resources and Mineral Resources, were determined by the City of Lake Elsinore to have no potential to be significantly impacted by the Project, as concluded by the Project's Initial Study (included in *Technical Appendix A* to this EIR) and after consideration of all comment received by the City of Lake Elsinore on the scope of this EIR and documented in the City's administrative record. The subjects of Agriculture and Forest Resources; and Mineral Resources; are discussed briefly in Section 5.0, *Other CEQA Considerations*.

4.0.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

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



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

- (a) *The individual effects may be changes resulting from a single project or a number of separate projects.*
- (b) *The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

CEQA Guidelines § 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: “1) a list of past, present, and probable future projects producing related or cumulative impacts, including if necessary, those projects outside the control of the agency [‘the list of projects approach’], or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact [‘the summary of projections approach’].”

The summary of projections approach is used in this EIR, except for the evaluation of near-term traffic and vehicular-related air quality, greenhouse gas, and noise impacts which rely instead on the list of projects approach. This methodology was determined to be appropriate by the City of Lake Elsinore because long-range planning documents contain a sufficient amount of information to enable an analysis of cumulative effects for all subject areas, with expectation of traffic and vehicular-related air quality, greenhouse gas, and noise effects, which require a greater level of detailed study.

Under this approach, the cumulative analysis under most sections considers impacts to each issue area based on the presumed buildout of the City’s General Plan as well as the General Plans of any nearby jurisdictions that occur within the cumulative study area for each subject area. For most issue areas, this would encompass the City of Lake Elsinore and nearby portions of unincorporated Riverside County, although the cumulative study area may be smaller or larger depending on the issue area under evaluation. For example, for the issue area of aesthetics, the cumulative study area is defined by the Project’s viewshed (i.e., off-site areas with views of the Project site), which encompasses only portions of the City of Lake Elsinore and unincorporated Riverside County. For the issue of hydrology and water quality, by contrast, the cumulative study area is defined as the Santa Ana River Watershed, which encompasses portions of San Bernardino, Riverside, Orange, and Los Angeles Counties. Refer to EIR Section 4.0 for a description of the specific cumulative study area used for each subject area evaluated in this EIR.

As noted, for most issue areas, the City of Lake Elsinore and nearby portions of unincorporated Riverside County is used as the Project’s cumulative study area. This cumulative study area encompasses a large area surrounding the Project site that has similar environmental characteristics as the Project area. This area has historically been used for extractive mining uses but has in recent decades been developed for residential and non-residential developments. This study area exhibits similar characteristics in terms of climate, geology,



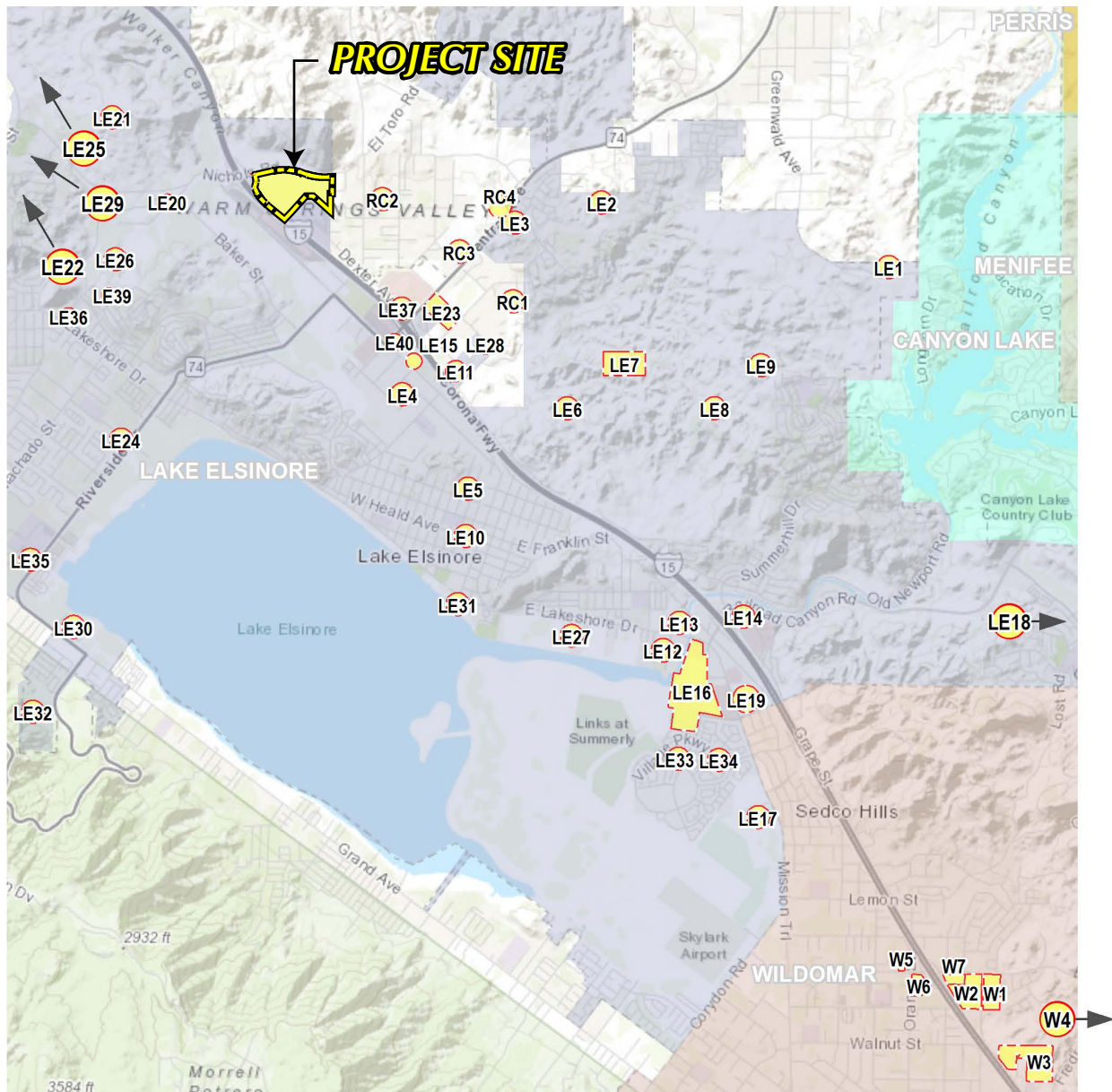
and hydrology, and therefore is also likely to have similar biological and archaeological characteristics as well. This study area also encompasses the service areas of the Project site's primary public service and utility providers. Areas outside of this study area either exhibit topographic, climatological, or other environmental circumstances that differ from those of the Project area or are simply too far from the proposed Project site to produce environmental effects that could be cumulatively considerable.

The analysis of cumulatively-considerable traffic impacts uses a combined approach, utilizing the list of projects approach for the near-term analysis of cumulatively-considerable traffic impacts, and the summary of projections approach for the evaluation of long-term cumulatively-considerable traffic impacts. The cumulative impact analyses of near-term vehicular-related air quality, greenhouse gas, and noise impacts, which rely on data from the Project's traffic study, also inherently utilize the combined approach. With the combined approach, the cumulative impact analyses for the analysis of traffic impacts, as well as cumulative air quality, greenhouse gas, and noise impacts, overstate the Project's (and Project-related components') potential cumulatively-considerable impacts as compared to an analysis that would rely solely on the list of projects approach or solely the summary of projections approach; therefore, the combined approach provides a conservative, "worst-case" analysis for cumulative traffic, air quality, greenhouse gas, and noise impacts.

For near-term conditions, the analyses of cumulatively-considerable traffic, air quality, greenhouse gas, and noise impacts are based on existing traffic conditions plus ambient growth and the manual addition of traffic from past, present, and reasonably foreseeable projects and includes approved and pending development projects in proximity to the Project site that would contribute traffic to the same transportation facilities as the Project, as well as large, traffic-intensive projects farther from the Project site that have the potential to affect regional transportation facilities. This methodology recognizes development projects that have the potential to contribute measurable traffic to the same intersections, roadway segments, and/or State highway system facilities as the proposed Project and have the potential to be made fully operational in the foreseeable future. As shown on Table 4.0-1, *Cumulative Project List*, and as depicted on Figure 4.0-1, *Cumulative Development Projects Location Map*, the near-term cumulative impact analysis of traffic impacts, as well as the near-term cumulative impact analysis of air quality, greenhouse gases, and noise, includes 44 other past, present, and reasonably foreseeable projects within this study area in addition to the summary of projections (Urban Crossroads, 2018d, pp. 80-81). The analysis of long-term cumulatively-considerable traffic impacts considers full buildout of the City of Lake Elsinore and nearby portions of unincorporated Riverside County, based on the General Plan land use plans for these jurisdictions.

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

- City of Lake Elsinore General Plan EIR (SCH No. 2005121019), available for public review at the City of Lake Elsinore Planning Division, located at 130 South Main Street, Lake Elsinore, CA 92530.



Source(s): Urban Crossroads (07-24-2018)

Figure 4.0-1



NOT TO SCALE



CUMULATIVE DEVELOPMENT PROJECTS LOCATION MAP



Table 4.0-1 Cumulative Project List

No.	Project Name	Location	Land Use	Quantity ¹
City of Lake Elsinore				
LE1	Greenwald ²	Lake Elsinore	Shopping Center	104.450 TSF
LE2	Ramsgate	Lake Elsinore	Single Family Residential	1,306 DU
			Condo/Townhomes	120 DU
LE3	Trieste Residential (Tract 36624)	Lake Elsinore	Single Family Residential	75 DU
LE4	Fairway Business Park	Lake Elsinore	Warehouse	279.445 TSF
LE5	Ness Industrial Garage	Lake Elsinore	Warehouse	12.000 TSF
LE6	Spyglass Ranch ³	Lake Elsinore	Single Family Residential	523 DU
			Condo/Townhomes	171 DU
			Shopping Center	145.00 TSF
LE7	South Shore I (Tract 31593)	Lake Elsinore	Single Family Residential	521 DU
	South Shore II (Tract 36567)	Lake Elsinore	Single Family Residential	147 DU
LE8	La Strada (Tract 32077)	Lake Elsinore	Single Family Residential	134 DU
LE9	Tuscany West (Tract 25473)	Lake Elsinore	Single Family Residential	164 DU
LE10	Marina Village Condos (Tract 33820) ⁶	Lake Elsinore	Condo/Townhomes	94 DU
LE11	La Quinta Inn	Lake Elsinore	Hotel	64 RM
LE12	LE Sports Complex	Lake Elsinore	Recreational Community Center	525.000 TSF
LE13	TAG Property ⁴	Lake Elsinore	New Car Sales	50.000 TSF
LE14	City Center Condos ⁴	Lake Elsinore	Condo/Townhomes	144 DU
LE15	Central & Collier	Lake Elsinore	Shopping Center	75.000 TSF
LE16	Diamond Specific Plan ⁵	Lake Elsinore	Condo/Townhomes	600 DU
			Hotel	150 RM
			General Office	425.000 TSF
			Shopping Center	472.000 TSF
LE17	The Colony ⁴	Lake Elsinore	Apartments	211 DU
	Back Basin Specific Plan & East Lake Specific Plan	Lake Elsinore	Single Family Residential	2,407 DU
			Condo/Townhomes	324 DU
	John Laing Homes (Phase 2)	Lake Elsinore	Single Family Residential	506 DU
			Condo/Townhomes	1,141 DU
			Apartments	308 DU
			Shopping Center	117.000 TSF
LE18	Canyon Hills Estates (Tract 34249)	Lake Elsinore	Single Family Residential	302 DU
	Canyon Hills (Multiple Tracts)	Lake Elsinore	Single Family Residential	2,700 DU
			Apartments	1,575 DU
	Audie Murphy (Tract 36484)	Lake Elsinore	Single Family Residential	109 DU
	Audie Murphy (Tract 36485)	Lake Elsinore	Single Family Residential	1,003 DU



Table 4.0-1 Cumulative Project List

No.	Project Name	Location	Land Use	Quantity ¹
LE19	Artisan Alley	Lake Elsinore	Shopping Center	95.100 TSF
LE20	Quikrete Plant	Lake Elsinore	Warehouse	163.900 TSF
LE21	Alberhill Ridge (Tract 35001)	Lake Elsinore	Single Family Residential	1,056 DU
			Apartments	345 DU
			Shopping Center	679.000 TSF
			General Office	679.000 TSF
LE22	Alberhill Ranch	Lake Elsinore	Single Family Residential	1,986 DU
LE23	Lake Elsinore Walmart	Lake Elsinore	Free-Standing Discount Superstore	154.487 TSF
			Specialty Retail	4.600 TSF
			Fast Food w/Drive Thru	6.800 TSF
			Fast Food w/o Drive Thru	4.600 TSF
LE24	Circle K	Lake Elsinore	Gas Station	4.500 TSF
LE25	Alberhill Villages	Lake Elsinore	Single Family Residential	9,536 DU
LE26	Terracina	Lake Elsinore	Single Family Residential	365 DU
LE27	Lakeshore Senior Apartments	Lake Elsinore	Senior Adult Housing Attached	121 DU
LE28	North Peak Plaza	Lake Elsinore	Condo/Townhomes	92 DU
			Shopping Center	92.000 TSF
LE29	Running Deer (TR 31957)		Single Family Residential	101 DU
LE30	Wake Rider Beach Resort	Lake Elsinore	Beach Resort	11.350 TSF
LE31	Lakeshore Town Center	Lake Elsinore	Town Center	237.400 TSF
LE32	Ortega	Lake Elsinore	Single Family Residential	105 DU
LE33	Summerly	Lake Elsinore	Single Family Residential	142 DU
LE34	Beazer, KB Homes, McMillin Homes, Richmond American	Lake Elsinore	Single Family Residential	395 DU
LE35	Village at Lake Elsinore SPA #1	Lake Elsinore	Single Family Residential	163 DU
LE36	Lakeview Manor	Lake Elsinore	Condo/Townhomes	104 DU
LE37	Golden Corral Restaurant	Lake Elsinore	Restaurant	7.798 TSF
LE38	Tige Watersports	Lake Elsinore	Shopping Center	34.500 TSF
LE39	Kassab Travel Center	Lake Elsinore	High Turnover (Sit-Down) Restaurant	17.200 TSF
LE40	Honda	Lake Elsinore	Automobile Sales	53.400 TSF
County of Riverside				
RC1	Lennar (Tract 31792)	County of Riverside	Single Family Residential	191 DU
RC2	PM33840	County of Riverside	Single Family Residential	4 DU
RC3	PP20158R1	County of Riverside	Storage Facility	103.727 TSF
RC4	CUP03651	County of Riverside	Recycling Facility	0.504 TSF

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

² Source: Greenwald Avenue Commercial Center TIA, Urban Crossroads, Inc., May 2008.

³ Source: Spyglass Ranch TIA (Revised), Kunzman Associates, February 2007.

⁴ Source: Lake Elsinore TAG Property TIA (Revised), Urban Crossroads, Inc., August 2008.

⁵ Source: The Diamond Specific Plan TIA, Urban Crossroads, Inc., April 2009.

(Urban Crossroads, 2018d, Table 4-5)



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

4.0.3 IDENTIFICATION OF IMPACTS

Subsections 4.1 through 4.18 of this EIR evaluate the 18 environmental subjects warranting detailed analysis, as determined by this EIR's Initial Study and in consideration of public comment on this EIR's NOP. The format of discussion is standardized as much as possible in each section for ease of review. The environmental setting is discussed first, followed by a discussion of the Project's potential environmental impacts based on specified thresholds of significance used as criteria to determine whether potential environmental effects are significant.

The thresholds of significance used in this EIR are based on the thresholds presented in CEQA Guidelines Appendix G (as updated in December 2018) and as applied by the City of Lake Elsinore to create the Project's Initial Study Checklist (included in *Technical Appendix A* to this EIR). The thresholds are intended to assist the reader of this EIR in understanding how and why this EIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant.

Serving as the CEQA Lead Agency for this EIR, the City of Lake Elsinore is responsible for determining whether an adverse environmental effect identified in this EIR should be classified as significant or less than significant. The standards of significance used in this EIR are based on the independent judgment of the City of Lake Elsinore, taking into consideration CEQA Guidelines Appendix G (as updated in December 2018); the City of Lake Elsinore's Municipal Code and adopted City policies; the judgment of the technical experts that prepared this EIR's Technical Appendices; performance standards adopted, implemented, and monitored by regulatory agencies; significance standards recommended by regulatory agencies; and the standards in CEQA that trigger the preparation of an EIR.

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

- No Impact: An adverse change in the physical environment would not occur.
- Less-than-Significant Impact: An adverse change in the physical environment would occur but the change would not be substantial or potentially substantial and would not exceed the threshold(s) of significance presented in this EIR.
- Significant Impact: A substantial or potentially substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this EIR, requiring the consideration of mitigation measures or alternatives to the proposed Project.



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

- Less-than-Significant Impact with Mitigation: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR; however, the impact can be avoided or reduced to a less than significant level through the application of feasible mitigation measures.
- Significant and Unavoidable Impact: A substantial or potentially substantial adverse change in the physical environment would occur that would exceed the threshold(s) of significance presented in this EIR. Feasible and enforceable mitigation measures that have a proportional nexus to the Project's impact are either not available or would not be fully effective in avoiding or reducing the impact to below a level of significance.

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



4.1 AESTHETICS

This Subsection describes the aesthetic qualities and visual resources present on the Project site and in the site's vicinity. This Subsection also evaluates the potential effects that the Project may have on these resources. Descriptions of existing visual characteristics, both on-site and in the vicinity of the Project site, and the analysis of potential impacts to aesthetic resources are based on several sources. Descriptions are based, in part, on field observations and site photographs collected by T&B Planning, Inc. on April 25, 2018 (T&B Planning, 2018); analysis of aerial photography (Google Earth, 2018); and Project application materials submitted to the City of Lake Elsinore and described in Section 3.0, *Project Description*, of this EIR. This Subsection is also based in part on information and policies contained in the City of Lake Elsinore General Plan (Lake Elsinore, 2011a), applicable City of Lake Elsinore Municipal Code sections (Lake Elsinore, 2018), and the Aesthetics section of the City of Lake Elsinore General Plan EIR (Lake Elsinore, 2011b).

4.1.1 EXISTING CONDITIONS

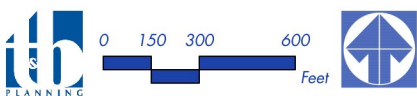
The Project site is located in the northeastern portion of the City of Lake Elsinore, which is within Riverside County. The Project site comprises approximately 72.5 acres. This site is located east of and adjacent to I-15, south of Nichols Road, and west of Wood Mesa Court/El Toro Road. Topographically, the site ranges in elevation from 1,294 feet above mean sea level (amsl) in the southwestern portion of the site to approximately 1,370 feet amsl in the eastern portion of the site; however, following reclamation elevations on-site would range from 1,294 to 1,323 feet amsl. (Google Earth, 2018)

CEQA Guidelines § 15125 requires EIRs to include a description of the physical environmental conditions in the vicinity of the Project as they existed at the time this EIR's Notice of Preparation (NOP) was released for public review. The NOP for this EIR was released on May 24, 2018. As of that date, the site consisted of a largely undeveloped and disturbed piece of property. The northern 45.4 acres of the Project site were undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (RP 2006-01A2); however, because reclamation activities will cease prior to implementation of the proposed Project, the analysis herein assumes that the existing visual condition of the northern 45.4 acres of the site is the condition that will exist upon completion of reclamation activities. At the time of site visits, the southern 27.1 acres of the site consisted of undeveloped, disturbed lands that are routinely disced as part of on-going fire abatement activities. Additionally, the Project site is traversed by Stovepipe Creek, which generally crosses the site in a northeast-to-southwest orientation. The existing conditions of the Project site were previously shown on Figure 2-4, *Aerial Photograph*.

To illustrate the existing visual conditions of the Project site in more detail, a photographic inventory was prepared. Figure 4.1-1, *Site Photograph Key Map*, depicts the locations of six (6) vantage point photographs, each of which are described below. These photographs, shown on Figure 4.1-2 and Figure 4.1-3, provide a representative visual inventory of the site's visual characteristics as seen from surrounding public viewing areas. It should be noted that while site photographs were collected in April 2018, conditions on the property have not substantially changed since that time (aside from on-going reclamation activities on the northern 45.4 acres of the site); thus, the photographs presented in this section provide an accurate reflection of the existing conditions of the Project site and surrounding areas.



Figure 4.1-1



SITE PHOTOGRAPH KEY MAP

East



South

Site Photograph 1: From Nichols Road looking east to south.

South



West

Site Photograph 2: From Nichols Road looking south to west.

South



North

Site Photograph 3: From the intersection of El Toro Road and Wood Mesa Court looking south to north.

Figure 4.1-2

Southwest



East

Site Photograph 4: From southern corner of Project Site looking southwest to east.

Northwest



Northeast

Site Photograph 5: From southwestern corner of Project Site looking northwest to northeast.

Northwest



Southeast

Site Photograph 6: From western edge of Project Site looking northwest to southeast.

Figure 4.1-3



- Site Photograph 1 (Figure 4.1-2): Site Photograph 1 was taken from the northwestern corner of the Project site, along Nichols Road looking east to south. As shown in this photograph, this portion of the Project site is undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). The near-ground of this photograph shows a gravelly slope with haybales along the manufactured slope at regular intervals. Orange construction fencing is visible along the toe of the manufactured slope. The left side of the photograph provides a view of Nichols Road with telephone poles and a three-wire fence alongside. Located in the background right portion of the photograph is I-15. Distant views of local steep hills also can be seen from this vantage in the left portion of the photo.
- Site Photograph 2 (Figure 4.1-2): Site Photograph 2 was taken from the northeastern corner of the Project site along Nichols Road, looking south to west. Chain link and three-wire fencing delineate the Project boundary and is visible throughout the photograph. Within the Project site, Stovepipe Creek is visible with shrubs delineating its location along the northern Project boundary before turning to the southwest. The remaining portions of the Project site are shown to include gently sloping topography with grassland vegetation that is regularly disced. The utility poles that travers the Project site are visible in the distance. The left side of the photograph depicts existing residential structures with tall trees along Wood Mesa Court. Visible on the right side of the photograph is Nichols Road. Along the horizon in the center-left portion of the photo is the Temescal Canyon High School. Distant views of mountains associated with the Cleveland National Forest also can be seen from this vantage.
- Site Photograph 3 (Figure 4.1-2): Site Photograph 3 was taken from the eastern boundary of the Project site near the intersection of El Toro Road and Wood Mesa Court looking south to north. From this location, the chain link fencing that occurs along the Project's eastern boundary are visible, beyond which is the Project site with gently sloping topography. Vegetation visible from this location is limited to grasses that are routinely disced for fire abatement purposes. The existing utility poles that traverse the site are visible throughout the photo. The left side of the photograph provides a view of El Toro Road, to the right of which the Temescal Canyon High School is visible. The right side of the photograph depicts Wood Mesa Court, beyond which are the steep hillsides that occur to the north of the Project site. Distant views of mountains associated with the Cleveland National Forest also can be seen from this vantage.
- Site Photograph 4 (Figure 4.1-3): Site Photograph 4 was taken from the southern portion of the Project site adjacent to the Temescal Canyon High School, looking southwest to east. As shown in this photograph, this portion of the Project site consists of gently sloping topography and is sparsely vegetated due to on-going fire abatement activities. Construction debris, consisting of concrete pipes and blocks, are visible in the center portion of the photo. In the right portion of the photo the existing utility poles on site are visible, beyond which are the steep hillsides located north of the Project site. Orange construction fencing is visible along the center-left portion of the photo, beyond which the existing mining activities to the north of Nichols Road are visible. The right side of the photograph depicts ornamental landscaping associated with existing residences to the east of the Project site.
- Site Photograph 5 (Figure 4.1-3): Site Photograph 5 was taken from southwestern corner of the Project site looking northwest to northeast. The Project site is visible throughout the foreground of this photo with gently sloping topography and sparse vegetation due to on-going fire abatement activities. In the



distance, the steep slopes that occur to the north of the Project site are visible, to the left of which is the existing mining operation located north of Nichols Road. The left side of the photograph depicts I-15. A wooden structure that appears to have been used in the past as a billboard is visible in the left portion of the photo. In the far-right portion of the photo, fencing and light poles associated with the adjacent Temescal Canyon High School are visible.

- Site Photograph 6 (Figure 4.1-3): Site Photograph 6 was taken from the western edge of Project site looking northwest to southeast. The near-ground of the photo depicts the gently sloping topography of the Project site. Orange construction fencing is visible in the left portion of the photo, which delineates areas in the northern portion of the Project site that are undergoing reclamation activities pursuant to RP 2006-01. In the left portion of the photo are manufactured slopes created as a visual buffer for mining activities to the north of the Project site, beyond which are the steep hillsides. Further in the background in the middle and right side of the photograph are tall trees, utility poles, street lamps, and vegetation associated with the existing residential uses to the east of the Project site.

4.1.2 APPLICABLE ENVIRONMENTAL REGULATIONS

A. City of Lake Elsinore General Plan

The City of Lake Elsinore General Plan Section 4.8, *Aesthetics*, states that “[s]cenic resources within and surrounding the City of Lake Elsinore include the lake, Cleveland National Forest, rugged hills, mountains, ridgelines, rocky outcroppings, streams, vacant land with native vegetation, buildings of historical and cultural significance such as the cultural center, bathhouse and military academy, parks, and trails.” (Lake Elsinore, 2011a, p. 4-72)

The City of Lake Elsinore General Plan Chapter 4.0, *Resource Protection and Preservation*, addresses sources of light and glare in the City and contains goals, policies, and implementation programs regarding aesthetics, which generally require the following: contour grading along steep slopes; preservation of the City’s visual character, in particular the surrounding hillsides, which topographically define the Lake Elsinore region; the application of design strategies for historical buildings; preservation or retention of existing scenic landscape resources, such as existing mature trees, streetscapes, and other landscape elements; the preservation of “valued” public views throughout the City, with particular emphasis on views of Lake Elsinore and local ridgelines; and the regulation of mining activities in a manner that does not adversely affect the City’s visual character. Additionally, the General Plan also identifies 15 landscape viewshed units in the City. As depicted in General Plan Figure 4.9, *Landscape Viewshed Units*, the Project site is located in Landscape Viewshed Unit 12, which is the location of the Lake Elsinore Outlet stores with a large vacant portion to the east (i.e., the Project site and areas north of the Project site) for future expansion (Lake Elsinore, 2011a, p. 4-73).

B. City of Lake Elsinore Municipal Code

The City of Lake Elsinore’s Zoning Code (Municipal Code Title 17) regulates the character and use of property throughout the various zones in the City (Lake Elsinore, 2018). The City of Lake Elsinore’s Zoning Code (Municipal Code Title 17) regulates the character and use of property throughout the various zones in the City (Lake Elsinore, 2018). Title 17 of the City’s Municipal Code designates overlay zones that affect aesthetic and visual qualities, including the: Scenic Overlay Zone (Chapter 17.16), Lakeshore Overlay Zone (Chapter



17.20), Hillside Planned Development Overlay (Chapter 17.36), and Historic Downtown Elsinore Overlay District (Chapter 17.40). The Project site is not located within any of these overlay zones. (Lake Elsinore, 2014)

City Municipal Code Chapter 17.112.040 identifies outdoor lighting standards for nonresidential development in the City. All outdoor lighting fixtures in excess of 60 watts are required to be oriented and shielded to prevent any glare or direct illumination on adjacent properties or streets. Additionally, due to the City's proximity to the Mt. Palomar Observatory, the use of low pressure sodium lighting is explicitly encouraged. (Lake Elsinore, 2011b, p. 3.3-24)

City Municipal Code Chapter 17.148.110 identifies parking lot lighting standards for all developments, except for single-family and duplex dwellings. Lighting shall be located and designed so as to preclude the direct glare of light shining onto adjacent property, streets, or into the sky above a horizontal plane passing through the luminaire. (Lake Elsinore, 2018)

4.1.3 BASIS FOR DETERMINING SIGNIFICANCE

Except as provided in Public Resources Code Section 21099, the proposed Project would result in a significant impact to aesthetics if the Project or any Project-related component would:

- a. *Have a substantial adverse effect on a scenic vista;*
- b. *Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;*
- c. *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings, or in urbanized areas, result in a conflict with applicable zoning and other regulations governing scenic quality (public views are those that are experienced from a publicly accessible vantage point); or*
- d. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.*

The above-listed thresholds are derived directly from Section I of Appendix G to the CEQA Guidelines and address typical adverse effects to aesthetics (OPR, 2018).

4.1.4 IMPACT ANALYSIS

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

Under existing conditions, the 72.5-acre Project site consists of undeveloped lands, portions of which are undergoing reclamation activities pursuant to Reclamation Plan No. 2016-01A2. Portions of the site also contain wild grass, weeds, and brush, with a natural drainage (Stovepipe Creek) traversing the site in a northeast-to-southwest orientation. The Project site does not comprise a scenic vista under existing conditions, although scenic vistas of the hillsides associated with Warm Springs to the north and the Santa Ana Mountains to the west are available from the Project site under existing conditions, and these landforms represent scenic resources. However, future development on site would be regulated by the Nichols Ranch Specific Plan



(NRSP), which restricts commercial buildings to a maximum height of 55 feet and restricts residential structures to a maximum height of 40 feet. These building heights are not of a scale that would obstruct views of the natural landforms, which rise to high elevations, from existing off-site viewing locations. Thus, the Project would result in less-than-significant impacts due to an adverse effect on views of distant mountains.

Lake Elsinore is considered a scenic resource by the City of Lake Elsinore General Plan. The Project site is located approximately 1.7 miles north from the lake and is not prominently visible from the lake due to distance and intervening development and topography. As such, the Project would have no impact on scenic views to or from the lake. The City of Lake Elsinore General Plan Chapter 4.0, *Resource Protection and Preservation-Part 2*, focuses on views to Lake Elsinore, and identifies 15 landscape viewshed units in the City (Lake Elsinore, 2011a, p. 4-72). The Project site is located within Landscape Viewshed Unit 12, which is the location of the Lake Elsinore Outlet stores and of which “a large portion to the east is vacant for future [development] expansion” (Lake Elsinore, 2011a, p. 4-73). The Project proposes the development of residential and commercial land uses, which is compatible with Viewshed Unit 12.

Accordingly, and based on the foregoing analysis, the Project would not have a substantial adverse effect on a scenic vista, and impacts would be less than significant.

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

According to information from the California Department of Transportation (Caltrans), there are no officially-designated scenic highways within the Project site’s vicinity. The Project site is located adjacent to I-15, which is identified as a “State Eligible” scenic highway but has not officially been designated as a scenic highway. SR-74, located approximately 0.6 mile south of the Project site, also is designated as a “State Eligible” scenic highway. (Caltrans, 2011)

In order to assess the Project’s potential to result in significant impacts to eligible scenic highway facilities in the area, a viewshed analysis was conducted in Google Earth. Based on the viewshed analysis, the Project would be visible from nearby I-15 segments. However, given that surrounding areas include Temescal Canyon High School to the south, Lake Elsinore Outlet Center to the southwest, and residential development to the east, the general character of the Project area would not change substantially. In addition, although the Project would obscure views of local steep hillsides to the northeast of the Project site, these hillsides are not unique and are only visible from along short segments of I-15 near the Project site. Accordingly, Project impacts to I-15 would be less than significant. Furthermore, the Project site does not contain any scenic resources, including, but not limited to trees, rock outcroppings and historic buildings under existing conditions. (Google Earth, 2018)

Based on the viewshed analysis, the Project would not be prominently visible from nearby segments of SR-74 due to intervening development and topography. Thus, Project impacts to nearby segments of SR-74 would be less than significant. (Google Earth, 2018)

Based on the foregoing, the proposed Project would not have a substantial adverse effect on scenic resources visible from a state scenic highway, and impacts would be less than significant.



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

According to mapping information from the Southern California Association of Governments (SCAG), which is based on U.S. Census data for urbanized areas, the Project site is not located within an urbanized area (SCAG, 2018). The area surrounding the Project site is transitioning from a concentrated mining area into a community of residential, commercial, industrial, and mixed-use developments. The Project site is surrounded by a mixture of mining uses, residential, school, and commercial land uses. Under existing conditions, the Project site is partially disturbed by on-going mining and reclamation activities, and does not contain any visually prominent resources. All development on the Project site would be required to comply with the Development Standards and Design Guidelines of the Nichols Ranch Specific Plan, which have been crafted to ensure that future development on-site is aesthetically pleasing and not visually offensive. The Design Guidelines contain standards related to architecture, landscaping, walls/fences, and other elements of the physical environment, and provide specific guidance for future implementing developments. Mandatory compliance with the Design Guidelines and development standards of the Specific Plan would ensure that the Project is developed in such a fashion so as not to degrade the visual character or quality of the Project site or its surroundings. Additionally, the Project would comply with all applicable Municipal Code requirements addressing scenic quality, including Chapter 17.184 (Design Review) of the City's Municipal Code, which requires approval of a Design Review prior to development of any commercial or residential structures on site. As part of the Design Review application(s), the Project Applicant would submit for approval plans identifying specific design elements of the proposed development, such as building elevations, floor plans, landscaping plans, etc. The Project also would be developed in a manner that is consistent with the transitioning mixed-use character of the surrounding area, including existing residential developments to the east, commercial development to the southwest, and an existing high school to the south. In addition, with mandatory compliance to the proposed NRSP, the Project would be developed in a manner that is not visually offensive either on-site or within the context of surrounding uses and planned development. There are no components of the Project that would result in the substantial degradation of the visual character or quality of the Project site and surrounding areas. Accordingly, impacts due to the degradation of the existing visual character or quality of the Project site and its surroundings would be less than significant.

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

Under existing conditions, lighting is used on occasion within the northern 45.4 acres of the Project site that are subject to reclamation activities during nighttime mining and reclamation activities, while no sources of artificial lighting are associated with the southern 27.1 acres of the site. Existing residential development located east of the site and the Temescal Canyon High School utilize sources of artificial lighting. Additionally, under existing conditions the Project site does not contain any topographically prominent landforms or visually prominent rock outcroppings. Additionally, and as visible throughout the site photos



(Figure 4.1-2 and Figure 4.1-3), the Project site does not contain any trees that may be visible from off-site locations.

Implementation of the proposed Project would include exterior lighting elements. The Project is a proposed residential community and neighborhood commercial center, and all lighting elements that would be installed would be of low intensity, primarily consisting of lights installed on residential/commercial lots, lights installed in on-site parks, and street lights, and would not create a new source of substantial light or glare that could adversely affect day or nighttime views in the area. Development of the proposed Project would be subject to the lighting design guidelines of the Nichols Ranch Specific Plan, as well as the lighting provisions of Municipal Code §§ 17.112.040 & 17.148.40, which would reduce Project lighting impacts to less-than-significant levels. The Project would use low sodium lighting on-site in mandatory compliance with City Municipal Code Chapter 17.112.040. (Lake Elsinore, 2011b, p. 3.3-24)

The Project site is located within a 45-mile radius of the Mt. Palomar Observatory (Zone B) (Riverside County, 2015, Figure 4.4-1). The 45-mile radius surrounding the Mt. Palomar Observatory is defined by Riverside County Ordinance No. 655 as an area in which light pollution may impact the functionality of the observatory. Any development project within a 45-mile radius of the observatory that would add artificial light sources, has the potential to contribute to sky glow effects, which could adversely affect operations at the observatory. Residential development on the Project site would be regulated by Chapter 17.148.110 of the City's Municipal Code while lighting associated with the commercial portion of the Project would be regulated by Chapter 17.112.040 of the Municipal Code, which identify lighting requirements for outdoor lighting for residential and commercial developments and parking lots to minimize potential adverse effects on observations at the Mt. Palomar Observatory. Mandatory compliance with applicable City lighting standards would reduce potential impacts regarding lighting and the Palomar Observatory to a less than significant level.

Implementation of the proposed Project would not result in substantial impacts regarding glare because the Project does not propose additional sources of glare such as highly reflective surfaces or buildings with reflective glass. Thus, the Project would have a less-than-significant impact regarding the creation of glare.

4.1.5 CUMULATIVE IMPACT ANALYSIS

For purposes of analysis herein, the Project's cumulative study area for aesthetics comprises all areas visible from and that have views of the Project site (i.e., the Project's viewshed). Existing and planned development located outside the Project's viewshed have no potential to cumulatively-contribute to visual quality effects.

As noted under the discussion of Threshold a, scenic vistas of the hillsides associated with Warm Springs to the north and the Santa Ana Mountains to the west are available from the Project site under existing conditions. However, the Project would be subject to the NRSP, which restricts residential and commercial buildings to a maximum height that would not obstruct views of the scenic resources from existing off-site view locations. Accordingly, the Project would not result in a cumulatively-considerable impact to scenic vistas.

As noted under the analysis of Threshold b, the Project site is not located within close proximity to any designated Scenic Routes and does not contain any scenic resources under existing conditions. The Project would affect views from I-15, which is designated as a "State Eligible" scenic highway. However, given



surrounding areas include commercial and residential development, the general character of the Project area would not change substantially. The Project would not be prominently visible from nearby segments of SR-74 due to intervening development and topography. Therefore, the Project would not result in a cumulatively-considerable impact to state scenic highways.

The Project site does not contain any trees or visually-prominent outcroppings. Therefore, the proposed Project would not contribute to a cumulatively significant scenic resource impact to designated scenic routes. As such, a less-than-significant cumulatively-considerable impact would occur.

With respect to visual quality and character of the site and surrounding area, under cumulative conditions the geographic area of the Project site includes I-15 to the west, mining and reclamation activities to the north, residential development to the east, and a high school to the south. The area surrounding the Project site is transitioning from a concentrated mining area into a community of residential, commercial, industrial, and mixed-use communities. Development of the Project would be subject to the NRSP design guidelines, which would ensure the Project does not create an aesthetically offensive site open to public view. Thus, the Project's impact would be less-than-cumulatively considerable and the proposed Project would not considerably contribute to an adverse cumulative impact to the existing visual character or quality of the Project site or its surroundings.

With respect to potential cumulative light and glare impacts, City of Lake Elsinore Municipal Code § 17.112.040 (Nonresidential Development Standards – Lighting), requires that all lighting fixtures in excess of 60 watts shall be oriented and shielded to prevent any glare or direct illumination on adjacent properties or streets, and recommends the use of low-pressure sodium fixtures. Cumulative development projects in the unincorporated areas of Riverside County and City of Lake Elsinore would comply with Riverside County Ordinance No. 655 (Regulating Light Pollution) or City of Lake Elsinore Municipal Code § 17.148.110, which identifies lighting requirements for outdoor lighting for residential developments. The requirements to shield lighting enforced by these lighting regulations has the effect of minimizing light and glare that would create sky glow. Additionally, development projects with artificial light sources in surrounding jurisdictions would be required to comply with the light reduction requirements applicable in their respective jurisdiction. Therefore, because City of Lake Elsinore Municipal Code § 17.112.040 and the light control regulations of other jurisdictions within the 45-mile radius of the Mount Palomar Observatory would minimize the amount of sky glow that could affect nighttime operations at the observatory the cumulative effect would be less than significant. Because the proposed Project is mandated to comply with the City's Municipal Code, the Project's contribution to light and glare impacts as well as sky glow impacts affecting the Mount Palomar Observatory would be less-than-cumulatively considerable.

4.1.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. No unique or scenic vistas would be impacted by the Project. The Project site does not contain any scenic vistas, nor does it offer unique views of any visually prominent features; therefore, impacts to scenic vistas resulting from the Project would be less than significant.

Threshold b: Less-than-Significant Impact. The Project would not be prominently visible to SR-74, an "Eligible State Scenic Highway – Not Officially Designated" due to intervening development and topography.



The Project would affect views from I-15; however, the Project would be compatible with surrounding land uses and distant hillsides seen from I-15 are not prominent nor unique and would remain visible in the distance beyond the Project site. Impacts to scenic highway corridors would be less than significant.

Threshold c: Less-than-Significant Impact. The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas. The Project proposes residential and commercial development that would be similar in character and quality to development in the surrounding areas to the east, west, and south of the Project site.

Threshold d: Less-than-Significant Impact. The Project would not create substantial amounts of light or glare. Compliance with the City of Lake Elsinore Municipal Code Title 17, including § 17.112.040, and Chapters 17.16, 17.20, 17.36, and 17.40 would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.

4.1.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project is required to comply with the Development Standards and Design Guidelines of the proposed Nichols Ranch Specific Plan. Compliance with these Project design features which include but are not limited to guidelines for architecture, landscaping, and lighting, would be assured by the City's future review of implementing building permits for compliance with the Nichols Ranch Specific Plan.
- The Project is required to comply with the City of Lake Elsinore's Zoning Code (Municipal Code Title 17), which regulates the character and use of property throughout the various zones in the City.

Mitigation

Impacts to aesthetics as a result of Project implementation would be less than significant, and mitigation is not required.



4.2 AIR QUALITY

This Subsection is based on a technical report prepared by Urban Crossroads, Inc., titled, “Nichols Ranch Air Quality Impact Analysis” (AQIA), which is dated August 23, 2018 and included as *Technical Appendix B* to this EIR (Urban Crossroads, 2018a). Refer to EIR Section 7.0, *References*, for a complete list of reference sources.

4.2.1 EXISTING CONDITIONS

A. South Coast Air Basin

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of South Coast Air Quality Management District (SCAQMD). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. The Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles. (Urban Crossroads, 2018a, p. 8)

The SCAB is bounded 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 bounded 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 bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. (Urban Crossroads, 2018a, p. 8)

B. Regional Climate

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality. (Urban Crossroads, 2018a, p. 8)

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F. (Urban Crossroads, 2018a, p. 8)

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of



heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast. (Urban Crossroads, 2018a, p. 8)

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast. (Urban Crossroads, 2018a, p. 9)

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. (Urban Crossroads, 2018a, p. 9)

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections. (Urban Crossroads, 2018a, p. 9)

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level. (Urban Crossroads, 2018a, p. 9)

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO_x and CO from vehicles, as the pool of cool



air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline. (Urban Crossroads, 2018a, p. 9)

C. 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 4.2-1, *Ambient Air Quality Standards*. (Urban Crossroads, 2018a, p. 10)

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 4.2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for Ozone (O₃), Carbon Monoxide (CO), Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Particulate Matter ≤ 10 Microns (PM₁₀), and Particulate Matter ≤ 2.5 Microns (PM_{2.5}) are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O₃ standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. (Urban Crossroads, 2018a, p. 10)

D. 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, PM₁₀, and PM_{2.5} at most monitoring locations. No areas of the SCAB exceeded federal or state standards for NO₂, SO₂, CO, sulfates or lead. See Table 4.2-2, *Attainment Status of Criteria Pollutants in the SCAB*, for attainment designations for the SCAB. Appendix 2.1 of the Project's AQIA (*Technical Appendix B*) provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB. (Urban Crossroads, 2018a, p. 13)

E. Local Air Quality

Relative to the Project site, the nearest long-term air quality monitoring site for O₃, CO, NO₂, and PM₁₀ is the South Coast Air Quality Management District Elsinore Valley monitoring station (SRA 25), located approximately 2.3 miles south of the Project site. Data for PM_{2.5} was obtained from the District Metropolitan Riverside County 1 monitoring station (SRA 23), located approximately 20 miles north of the project site. (Urban Crossroads, 2018a, p. 13)

The most recent three (3) years of data available is shown on Table 4.2-3, *Project Area Air Quality Monitoring Summary 2015-2017*, and identifies the number of days ambient air quality standards were exceeded for the

Table 4.2-1 Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) 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 (PM _{2.5}) 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 Fluorescence; 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 ...

See footnotes on next page ...

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

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled 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 $150 \mu\text{g}/\text{m}^3$ 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 $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ 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 ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

(Urban Crossroads, 2018a, Table 2-1)

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

Criteria Pollutant	State Designation	Federal Designation
Ozone - 1hour 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 ¹	Attainment	Nonattainment (Partial)

Source: State/Federal designations were taken from <http://www.arb.ca.gov/design/adm/adm.htm>.

Note: See Appendix 2.1 of the Project's AQIA (*Technical Appendix B*) for a detailed map of State/National Area Designations within the South Coast Air Basin.

(Urban Crossroads, 2018a, Table 2-2)



Table 4.2-3 Project Area Air Quality Monitoring Summary 2015-2017

POLLUTANT	STANDARD	YEAR		
		2015*	2016*	2017**
Ozone (O ₃)				
Maximum 1-Hour Concentration (ppm)		0.131	0.124	0.121
Maximum 8-Hour Concentration (ppm)		0.093	0.093	0.098
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	18	15	23
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	35	45	56
Number of Days Exceeding Federal 8-Hour Standard	> 0.07 ppm	31	44	54
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		0.8	1.2	--
Maximum 8-Hour Concentration (ppm)		0.6	0.6	--
Nitrogen Dioxide (NO ₂)				
Maximum 1-Hour Concentration (ppm)		0.047	0.051	--
Annual Arithmetic Mean Concentration (ppm)		0.009	0.02	--
Particulate Matter ≤ 10 Microns (PM ₁₀)				
Maximum 24-Hour Concentration (µg/m ³)		90	99	--
Annual Arithmetic Mean (µg/m ³)		18.7	21.4	--
Number of Samples		356	366	--
Number of Samples Exceeding State Standard	> 50 µg/m ³	5	4	--
Number of Samples Exceeding Federal Standard	> 150 µg/m ³	0	0	0
Particulate Matter ≤ 2.5 Microns (PM _{2.5})* **				
Maximum 24-Hour Concentration (µg/m ³)		54.7	39.12	27.2
Annual Arithmetic Mean (µg/m ³)		11.89	12.54	11.20
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m ³	9	4	--

Source: SCAQMD's Air Quality Data Tables

-- = data not available from ARB

*Data for 2015 and 2016 obtained from SCAQMD.

** Data for 2017 obtained from ARB

***Data for PM_{2.5} for 2017 was obtained from the Riverside-Rubidoux monitoring site.

(Urban Crossroads, 2018a, Table 2-3)

study area, which is considered to be representative of the local air quality at the Project site. Additionally, data for SO₂ has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO₂ concentrations. (Urban Crossroads, 2018a, p. 13)

F. Criteria Pollutants

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



- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. (Urban Crossroads, 2018a, p. 14)
- Sulfur Dioxide (SO₂): 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 SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄). Collectively, these pollutants are referred to as sulfur oxides (SO_x). (Urban Crossroads, 2018a, p. 15)
- Nitrogen Oxides (Oxides of Nitrogen, or NO_x): Nitrogen oxides (NO_x) consist of nitric oxide (NO), nitrogen dioxide (NO₂) and nitrous oxide (N₂O) and are formed when nitrogen (N₂) combines with oxygen (O₂). 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. NO₂ 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, NO₂ is the most abundant in the atmosphere. As ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO₂ than those indicated by regional monitors. (Urban Crossroads, 2018a, p. 15)
- Ozone (O₃): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_x), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. (Urban Crossroads, 2018a, p. 15)
- PM₁₀ (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM₁₀ also causes visibility reduction and is a criteria air pollutant. (Urban Crossroads, 2018a, p. 15)
- PM_{2.5} (Particulate Matter less than 2.5 microns): 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 SO₂ 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. (Urban Crossroads, 2018a, p. 15)

- **Volatile Organic Compounds (VOC):** Volatile organic compounds 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 O₃, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably. (Urban Crossroads, 2018a, p. 15)
- **Reactive Organic Gases (ROG):** Similar to VOC, Reactive Organic Gases (ROG) 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. ROG are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably. (Urban Crossroads, 2018a, pp. 15-16)
- **Lead (Pb):** Lead 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. (Urban Crossroads, 2018a, p. 16)

G. Health Effects of Air Pollutants

1. Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels. (Urban Crossroads, 2018a, p. 16)

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. (Urban Crossroads, 2018a, p. 16)

2. Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes. (Urban Crossroads, 2018a, p. 16)

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities. (Urban Crossroads, 2018a, p. 16)

3. Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM₁₀ 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. (Urban Crossroads, 2018a, p. 17)

Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. (Urban Crossroads, 2018a, p. 17)

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}. (Urban Crossroads, 2018a, p. 17)

4. Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO₂ 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 NO₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary



disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. (Urban Crossroads, 2018a, p. 17)

In animals, exposure to levels of NO₂ 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 NO₂. (Urban Crossroads, 2018a, p. 17)

5. Sulfur Dioxide

A few minutes of exposure to low levels of SO₂ 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 SO₂. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO₂. (Urban Crossroads, 2018a, p. 17)

Animal studies suggest that despite SO₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. (Urban Crossroads, 2018a, p. 17)

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO₂ levels. In these studies, efforts to separate the effects of SO₂ from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor. (Urban Crossroads, 2018a, pp. 17-18)

6. Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. (Urban Crossroads, 2018a, p. 18)

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers. (Urban Crossroads, 2018a, p. 18)

7. Odors

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. (Urban Crossroads, 2018a, p. 18)

4.2.2 APPLICABLE ENVIRONMENTAL REGULATIONS

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

A. Federal Regulations

1. Federal Clean Air Act

The Clean Air Act (CAA; 42 U.S.C. § 7401 et seq.) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants, which include O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5}, and lead. (EPA, 2017a)

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

The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions address the urban air pollution problems of ozone (smog), carbon monoxide (CO), and particulate matter (PM₁₀). Specifically, it clarifies how areas are designated and re-designated "attainment." It also allows EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet Federal air quality standards designed to protect public health. (EPA, 2017b) Mobile source emissions are regulated in accordance with the CAA Title II provisions. These standards are intended to reduce tailpipe emissions of hydrocarbons, CO, and NO_x on a phased-in basis that began in model year 1994. Automobile manufacturers also are required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling. These provisions further require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. (EPA, 2017c)

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



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

B. State Regulations

1. California Clean Air Act (CCAA)

The California Clean Air Act (CCAA) establishes numerous requirements for district plans to attain state ambient air quality standards for criteria air contaminants. The CCAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the California Ambient Air Quality Standards (CAAQS), by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. For districts with serious air pollution, its attainment plan should include the following: no net increase in emissions from new and modified stationary sources; and best available retrofit technology for existing sources. (SCAQMD, 2018)

2. Air Quality Management Planning

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

4.2.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to air quality if the Project or any Project-related component would:

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



- c. *Expose sensitive receptors to substantial pollutant concentrations; or*
- d. *Result in other emissions (such as those leading to odors) affecting a substantial number of people.*

The above-listed thresholds are derived directly from Section III of Appendix G to the CEQA Guidelines and address typical adverse project effects on regional air pollution and nearby sensitive receptors (OPR, 2018). The City of Lake Elsinore has chosen to apply SCAQMD significance thresholds, as presented in SCAQMD's CEQA Air Quality Significance Thresholds (March 2015), to evaluate the Project's air quality impacts against the above Appendix G standards.

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

Threshold b. addresses Section III.b of Appendix G to the CEQA Guidelines, while Threshold c. addresses Section III.c of Appendix G to the CEQA Guidelines. Under these thresholds, emissions generated by a development project would be significant under Threshold b. if emissions are projected to exceed the Regional Thresholds established by the SCAQMD for criteria pollutants and would be significant under Threshold c. if emissions are projected to exceed the Localized Significance Thresholds (LSTs) established by the State of California and the SCAQMD for criteria pollutants.

Table 4.2-4, *SCAQMD Maximum Regional Emissions Thresholds*, and Table 4.2-5, *SCAQMD Maximum Localized Emission Thresholds*, respectively depict the SCAQMD's Regional and Localized Significance Thresholds for regulated pollutants. 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, as discussed in further detail below.

Additionally, and based on the SCAQMD's CEQA Air Quality Handbook (1993), a project's localized CO emissions impacts would be significant under Threshold d. if they exceed the following California standards for localized CO concentrations:

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

The SCAQMD published a report giving direction on how to address cumulative impacts from air pollution, titled, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (SCAQMD, 2003). In this report the AQMD clearly states (Page D-3): (Urban Crossroads, 2018a, p. 43)

Table 4.2-4 SCAQMD Maximum Regional Emissions Thresholds

Pollutant	Construction	Operations
Regional Thresholds^A		
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

^A: Based on SCAQMD Air Quality Significance Thresholds, March 2015

(Urban Crossroads, 2018a, Table 3-1)

Table 4.2-5 SCAQMD Maximum Localized Emission Thresholds

Pollutant	Construction	Operations
Localized Thresholds^B		
NO _x	303 lbs/day (Site Preparation)	N/A
	266 lbs/day (Grading)	
CO	1,339 lbs/day (Site Preparation)	N/A
	1,961 lbs/day (Grading)	
PM ₁₀	10 lbs/day (Site Preparation)	N/A
	11 lbs/day (Grading)	
PM _{2.5}	6 lbs/day (Site Preparation)	N/A
	7 lbs/day (Grading)	

^B: As per the SCAMD Localized Significance Threshold (LST) Methodology, localized thresholds are determined based on the maximum number of acres disturbed on the peak day using construction equipment. Based on the equipment list and the nearest sensitive receptor distance of 56 feet/17.07 meters, the proposed Project could actively disturb approximately 3.5 acres per day during the site preparation and 4.0 acres per day during the grading activities.

(Urban Crossroads, 2018aTable 3-1)

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



the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”

The analysis presented herein assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD’s recommended daily thresholds for project-specific impacts would also not cause a commutatively-considerable increase in emissions for those pollutants for which the SCAB is in nonattainment. Therefore, the individual project would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. (Urban Crossroads, 2018a, p. 43)

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

4.2.4 IMPACT ANALYSIS

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

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards. (Urban Crossroads, 2018a, pp. 39-40)

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. (Urban Crossroads, 2018a, p. 40)



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) and updated emission inventory methodologies for various source categories. The Project's consistency with the AQMP will be determined using the 2016 AQMP is discussed below. (Urban Crossroads, 2018a, p. 40)

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 as follows: (Urban Crossroads, 2018a, p. 40)

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

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if Localized Significance Thresholds (LSTs) or Regional Significance Thresholds were exceeded (Urban Crossroads, 2018a, p. 40). The Project has the potential to result in significant air quality emissions that could result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP during both construction and long-term operation. Each is discussed below.

Construction Impacts

As discussed under the analysis of Threshold d., the Project would not exceed the applicable LST for construction activity (after implementation of applicable mitigation measures). However, as discussed under the analysis of Thresholds b. and c., the Project would exceed the regional significance thresholds for emissions of NO_x. No feasible mitigation measures exist that would reduce these emissions to levels that are less-than-significant. Moreover, a majority of construction-source NO_x emissions would be generated from the hauling of soil during grading activities from trucks that cannot be mitigated. Because neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce construction-related NO_x emissions to levels that are less-than-significant, thus these emissions are considered significant and unavoidable. As such, the Project has the potential to conflict with the AQMP according to this criterion. (Urban Crossroads, 2018a, p. 40)

Operational Impacts

As discussed under the analysis of Threshold d., the Project would not exceed the applicable LST thresholds for operational activity. However, as discussed under the analysis of Thresholds b. and c., the Project would exceed the applicable regional significance thresholds for operational activity for emissions of NO_x. Over 93 percent of operational-source NO_x emissions would be generated from the mobile activities from vehicles that



cannot be mitigated. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in Project mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. No feasible mitigation measures exist that would reduce NO_x emissions to levels that are less-than-significant; thus, these emissions are considered significant and unavoidable. As such, the Project has the potential to conflict with the AQMP according to this criterion. (Urban Crossroads, 2018a, pp. 40-41, 45)

On the basis of the preceding discussion, the Project is determined to be inconsistent 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 City of Lake Elsinore General Plan (referred to as the “General Plan”) is considered to be consistent with the AQMP. (Urban Crossroads, 2018a, p. 41)

Construction Impacts

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site’s land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, construction activities would not exceed the assumptions in the AQMP. (Urban Crossroads, 2018a, p. 41)

Operational Impacts

The northern portion of the Project site is located within the Alberhill Ranch Specific Plan (ARSP) and is designated as “Commercial Specific Plan (C-SP),” which allows for up to 380,000 square feet of regional general commercial uses. The City of Lake Elsinore General Plan designates the southern portion as “General Commercial” which allows for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar compatible uses. The Project proposes an amendment to the ARSP to remove the northern portion of the Project site that is currently located within the ARSP and establish the Nichols Ranch Specific Plan (NRSP). Additionally, the Project would amend the General Plan land use designation of “General Commercial” to “Specific Plan.” The Project proposes to develop 168 low-medium density residential dwelling units, an 8.3-acre park, 6,000 square feet (s.f.) of fast-food restaurant with drive-through window use, 9,400 s.f. of high turnover (sit-down) restaurant use, 8,000 s.f. of health and fitness club use, 43,000 s.f. of office use, 5,500 s.f. of fast food without drive-through, a 16-vehicle fueling position gas station with convenience store and car wash, and a 130-room hotel.

Table 4.2-6, *Currently Approved Land Use vs. Project Buildout*, provides a comparison of the emissions that would result from development of the Project site pursuant to the site's existing General Plan and Specific Plan designations with the emissions that would result from buildout of the proposed Project. Detailed operation model outputs are presented in Appendix 3.3 of the Project's AQIA (*Technical Appendix B*). As shown, the Project would result in substantially fewer emissions of criteria pollutants as compared to development of the site with commercial retail land uses pursuant to the site's existing land use designations. (Urban Crossroads, 2018a, p. 30) As such the Project would not exceed the AQMP growth assumptions for the Project site. (Urban Crossroads, 2018a, p. 41).

Table 4.2-6 Currently Approved Land Use vs. Project Buildout

Operational Activities- Total Maximum Daily Emissions	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Currently Approved Land Use						
Area Source	19.05	7.90E-04	0.09	0.00	3.10E-04	3.10E-04
Energy Source	0.06	0.51	0.43	3.05E-03	0.04	0.04
Mobile	49.36	328.34	455.53	2.11	160.61	43.75
Total Maximum Daily Emissions	68.46	328.85	456.05	2.11	160.65	43.79
Project Buildout						
Area Source	13.23	2.95	15.06	0.02	0.30	0.30
Energy Source	0.67	5.99	4.49	0.04	0.46	0.46
Mobile	19.76	131.55	167.70	0.76	56.27	15.34
Total Maximum Daily Emissions	33.66	140.49	187.26	0.82	57.03	16.10
Net Change	-34.81	-188.36	-268.79	-1.29	-103.62	-27.69

(Urban Crossroads, 2018a, Table 3-7)

AQMP Consistency Conclusion

The Project would result in or cause NAAQS or CAAQS violations. Although the proposed Project would result in less emissions than what is expected under the currently adopted land uses, Project construction-source and operational-source emissions would exceed the Regional Thresholds for emissions of NO_x. Because no feasible mitigation measures exist that would reduce NO_x emissions to levels that are less-than-significant, these emissions are considered significant and unavoidable. As such, the Project would result in significant direct and cumulatively-considerable impact due to a conflict with the AQMP. (Urban Crossroads, 2018a, p. 42)

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

Land uses proposed by the Project affect air quality through construction-source and operational-source emissions. 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 (NO_x, VOC, PM₁₀, PM_{2.5}, SO_x, 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 this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1 to 3.4 of the Project's AQIA (*Technical Appendix B*). (Urban Crossroads, 2018a, p. 23)

□ Construction Emissions Impact Analysis

Construction Emissions

Construction activities associated with the Project will result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Construction related emissions are expected from the following construction activities (Urban Crossroads, 2018a, p. 23):

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating
- Construction Workers Commuting

Construction is expected to commence in June 2019 and will last through January 2024, as previously shown in EIR Table 3-3 in Subsection 3.0, *Project Description*. The duration of construction activity was estimated based on CalEEMod model defaults, past project experience, and a 2024 project buildout year. The construction schedule utilized in the analysis (EIR Table 3-3) represents a “worst-case” analysis scenario in that 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.¹ The construction schedule has been adjusted to account for possible overlap in phases. It should be noted that proposed grading of the Project site may occur in a single phase, or up to three phases. As previously shown in EIR Table 3-3, mass grading of the Project site would occur prior to the start of Phase 1 construction activities. Fine grading has been incorporated into the beginning of each phase and would occur simultaneous with building construction of each sub-phase. Paving and architectural coating activities would commence sometime during building construction activities and would be conducted concurrently. Further, each phase of construction activity is assumed to overlap with each subsequent phase. Phase 2 fine grading and building construction would overlap with Phase 1 building construction and Phase 3 of fine grading and building construction would overlap with Phase 2 building construction. This potential overlap allows for disclosure of a conservative estimate of emissions for CEQA purposes. (Urban Crossroads, 2018a, p. 24)

The detailed summary of construction equipment was previously shown in EIR Table 3-4 and was estimated based on CalEEMod model defaults and Urban Crossroads' professional judgement. The site-specific

¹ As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2, Section 4.3 “OFFROAD Equipment” as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.



construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity and associated equipment both represent a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of the Project's AQIA (*Technical Appendix B*). (Urban Crossroads, 2018a, p. 24)

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. The Project would require approximately 19,000 cubic yards of soil import which would be sourced from the North Nichols Mine site, located approximately 0.5 mile from the Project area. (Urban Crossroads, 2018a, p. 26)

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site), were estimated based on CalEEMod model defaults. (Urban Crossroads, 2018a, p. 26)

Construction Emissions Summary

The SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust); and Rule 1186 / 1186.1 (Street Sweepers). As such, credit for Rule 1113 and Rule 403 have been taken. (Urban Crossroads, 2018a, p. 26)

The estimated maximum daily construction emissions without mitigation are summarized on Table 4.2-7, *Emissions Summary of Overall Construction (Without Mitigation)*. Detailed construction model outputs are presented in Appendix 3.1 of the Project's AQIA (*Technical Appendix B*). Under the scenarios described above, emissions resulting from the Project construction would exceed criteria pollutant thresholds established by the SCAQMD for emissions of NO_x. As such, prior to mitigation, the Project would violate an air quality standard and would contribute substantially to an existing air quality violation, as NO_x is an ozone precursor. Additionally, the Project's construction activities would result in a cumulatively-considerable net increase of NO_x, a precursor to ozone, and the Project region is non-attainment for ozone. Accordingly, the Project's construction-related air quality emissions would be significant on a direct and cumulatively-considerable basis prior to implementation of mitigation measures.

□ Operational Emissions Impact Analysis

Operational activities associated with the proposed Project would result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Operational emissions would be expected from the following primary sources: (Urban Crossroads, 2018a, p. 27)

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions



Table 4.2-7 Emissions Summary of Overall Construction (Without Mitigation)

Year	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2019	15.27	174.41	89.36	0.20	19.72	12.46
2020	24.46	203.80	112.00	0.27	19.18	11.44
2021	36.49	155.02	102.02	0.27	16.25	8.82
2022	8.24	84.92	54.52	0.16	10.03	5.23
2023	30.75	44.03	42.21	0.11	5.17	2.55
2024	25.82	1.71	3.39	7.47E-03	0.54	0.21
Maximum Daily Emissions	36.49	203.80	112.00	0.27	19.72	12.46
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	YES	NO	NO	NO	NO

(Urban Crossroads, 2018a, Table 3-4)

Area Source Emissions

Architectural Coatings

Over a period of time, the buildings that are part of this Project would be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod. (Urban Crossroads, 2018a, pp. 27-28)

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. (Urban Crossroads, 2018a, p. 28)

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. (Urban Crossroads, 2018a, p. 28)



Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod. (Urban Crossroads, 2018a, p. 28)

Energy Source Emissions

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from 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. (Urban Crossroads, 2018a, p. 28)

Mobile Source Emissions

Vehicles

Project mobile source air quality impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project-related operational air quality impacts are derived primarily from vehicle trips generated by the Project. Trip characteristics available from the report, *Nichols Ranch Traffic Impact Analysis* ("TIA," EIR *Technical Appendix L*), were utilized in this analysis. (Urban Crossroads, 2018a, pp. 28-29)

Per the Project's TIA, the Project is expected to generate a net total of approximately 6,901 trip-ends per day (actual vehicles) on a typical weekday with 734 AM peak hour trips and 622 PM peak hour trips. It should be noted that weekday and Saturday trip characteristics are based on CalEEMod defaults. The Project's AQIA relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck emissions associated with the Project. Trip characteristics based on CalEEMod defaults were used in the analysis. (Urban Crossroads, 2018a, p. 29)

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod model. (Urban Crossroads, 2018a, p. 29)

Operational Emissions Summary

Table 4.2-8, *Summary of Operational Emissions (Without Mitigation)*, summarizes the Project's daily regional emissions from on-going operations. During operational activity, the Project would exceed the thresholds of significance for emissions of NO_x only. Detailed construction model outputs are presented in Appendix 3.3 of the Project's AQIA (*Technical Appendix B*). Accordingly, prior to mitigation the Project's operational emissions would violate an applicable air quality standard and would contribute substantially to an existing air

quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project's operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-attainment (i.e., ozone). Accordingly, the Project's impacts would be significant on both a direct and cumulatively-considerable basis prior to mitigation. (Urban Crossroads, 2018a, p. 29)

Table 4.2-8 Summary of Operational Emissions (Without Mitigation)

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	13.23	2.95	15.06	0.02	0.30	0.30
Energy Source	0.67	5.99	4.49	0.04	0.46	0.46
Mobile	21.70	132.55	175.81	0.80	56.26	15.33
Total Maximum Daily Emissions	35.60	141.48	195.37	0.85	57.03	16.10
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	YES	NO	NO	NO	NO
Operational Activities – Winter Scenario	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	13.23	2.95	15.06	0.02	0.30	0.30
Energy Source	0.67	5.99	4.49	0.04	0.46	0.46
Mobile	17.82	130.55	159.59	0.73	56.27	15.34
Total Maximum Daily Emissions	31.71	139.49	179.15	0.79	57.03	16.10
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	YES	NO	NO	NO	NO

(Urban Crossroads, 2018a, Table 4-6)

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

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

Background on LST Development

The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology (Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs). (Urban Crossroads, 2018a, p. 31)

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of



one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5}, both of which are non-attainment pollutants. (Urban Crossroads, 2018a, p. 31)

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. (Urban Crossroads, 2018a, p. 31)

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology (LST Methodology). (Urban Crossroads, 2018a, p. 31)

☐ **Construction-Related LST Analysis**

Emissions Considered

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. (Urban Crossroads, 2018a, p. 31)

Applicability of LSTs for the Project

For the proposed Project, the appropriate Source Receptor Area (SRA) for the LST is the Lake Elsinore monitoring station (SRA 25). LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter ≤ 10 microns (PM₁₀), and particulate matter ≤ 2.5 microns (PM_{2.5}). The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size. (Urban Crossroads, 2018a, p. 31)

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken: (Urban Crossroads, 2018a, p. 31)

- 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 Localized Significance Thresholds 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.

- The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

Maximum Daily Disturbed Acreage

Table 4.2-9, *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 3.5 acres per day during the site preparation and 4.0 acres per day during the grading phase of construction. (Urban Crossroads, 2018a, p. 32)

Table 4.2-9 Maximum Daily Disturbed Acreage

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Site Preparation	Crawler Tractors	4	0.5	8	2
	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed per day during Site Preparation					3.5
Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Grading	Crawler Tractors	2	0.5	8	1
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2
Total acres disturbed per day during Grading					4.0

(Urban Crossroads, 2018a, Table 3-8)

Sensitive Receptors

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, individuals with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as “sensitive receptors”; they are also known to be locations where an individual can remain for 24 hours. The nearest sensitive receptors are residential homes and Temescal Canyon High School, as shown on Figure 4.2-1, *Sensitive Receptor Locations*. For analytical purposes, the nearest residence is located approximately 56 feet/ 17.07 meters east of the Project site’s eastern boundary. The Methodology explicitly states that “It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to



Figure 4.2-1



NOT TO SCALE



SENSITIVE RECEPTOR LOCATIONS



the nearest receptor should use the LSTs for receptors located at 25 meters.” Consistent with the SCAQMD’s Final LST Methodology, a 25-meter receptor distance was utilized in the Project’s AQIA and provides for a conservative i.e. “health protective” standard of care. (Urban Crossroads, 2018a, p. 33)

Construction-Source Emissions LST Analysis

Because the total acreage disturbed is less than five acres per day for both the site preparation phase and the grading phase, the SCAQMD’s screening look-up tables were utilized in determining impacts. It should be noted that since the look-up tables identifies thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized, consistent with SCAQMD guidance, in order to interpolate the threshold values for the other disturbed acreage not identified. As previously noted, a 25-meter receptor distance is utilized to determine the LSTs for emissions of CO, NO₂, PM₁₀, and PM_{2.5}. (Urban Crossroads, 2018a, p. 35)

Table 4.2-10, *Localized Significance Summary – Construction (Without Mitigation)*, identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Without mitigation, localized construction emissions would exceed the applicable SCAQMD LSTs for emissions of PM₁₀ and PM_{2.5} during site preparation. Outputs from the model runs for construction LSTs are provided in Appendix 3.1 of the Project’s AQIA (*Technical Appendix B*). Accordingly, prior to mitigation, the Project’s construction-related localized emissions of PM₁₀ and PM_{2.5} would expose sensitive receptors to substantial pollutant concentrations and impacts would be significant on both a direct and cumulatively-considerable basis. (Urban Crossroads, 2018a, p. 35)

□ Operational-Related LST Analysis

The proposed Project involves the construction and operation of up to 168 single family residential dwelling units, 8.3-acre park, 6,000 square feet (sf) of fast-food restaurant with drive-through window use, 9,400 sf of high turnover (sit-down) restaurant use, 8,000 sf of health and fitness club use, 43,000 sf of office use, 5,500 sf of fast food without drive-through, a 16-vehicle fueling position gas station with convenience store and car wash, and 130-room hotel. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The proposed 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. Accordingly, localized air quality impacts associated with Project operations would be less than significant on both a direct and cumulatively-considerable basis.

□ CO “Hot Spot” Analysis

An adverse CO concentration, known as a “hot spot,” would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO. (Urban Crossroads, 2018a, p. 37)

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

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

On-Site Site Preparation Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	68.20	23.17	10.85	6.70
SCAQMD Localized Threshold	303	1,339	10	6
Threshold Exceeded?	NO	NO	YES	YES
On-Site Mass Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	65.83	33.93	6.48	3.91
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO
On-Site Phase 1 Fine Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	65.92	34.00	6.47	3.91
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO
On-Site Phase 2 Fine Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	60.84	32.38	6.26	3.72
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO
On-Site Phase 3 Fine Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	56.54	31.23	6.08	3.55
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO

(Urban Crossroads, 2018a, Table 3-9)

last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as noted in Table 2-2. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented in Table 2-3 of the Project's AQIA (*Technical Appendix B*). (Urban Crossroads, 2018a, pp. 37-38)

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 3-11 of the Project’s AQIA (*Technical Appendix B*). (Urban Crossroads, 2018a, p. 38)

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, of the 8.4 ppm 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 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared. 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. (Urban Crossroads, 2018a, p. 38)

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour – or 24,000 vehicles per hour where vertical and/or horizontal air does not mix – in order to generate a significant CO impact. (Urban Crossroads, 2018a, p. 38)

Traffic volumes generating the CO concentrations for the “hot spot” analysis are shown on Table 3-12 of the Project’s AQIA (*Technical Appendix B*). The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which had a daily traffic volume of approximately 100,000 vehicles per day and AM/PM traffic volumes of 8,062 vehicles per hour and 7,719 vehicles per hour respectively. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations ($4.6 \text{ ppm} \times 4 = 18.4 \text{ ppm}$) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).² At buildout of the Project, as shown on Exhibit 9-3 of the Project’s TIA (*Technical Appendix L*), the highest average daily trips on a segment of road would be 41,100 daily trips on Cambern Avenue and Central Avenue (SR-74), which is lower than the highest daily traffic volumes at Wilshire Blvd. and Veteran Ave. of 100,000 vehicles per day. Additionally, and as shown on Table 4.2-11, *Project Traffic Volumes*, the highest AM/PM trips on a segment of road would be 5,030 vehicles per hour and 5,741 vehicles per hour respectively, which is lower than the highest AM/PM traffic volumes at Wilshire Blvd. and Veteran Ave. of 8,062 vehicles per hour and 7,719 vehicles per hour. (Urban Crossroads, 2018a, pp. 38-39)

The proposed Project considered herein would not produce the volume of traffic required to generate a CO “hot spot” either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO “hot spots” are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant. (Urban Crossroads, 2018a, p. 39)

² Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).



Table 4.2-11 Project Traffic Volumes

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Lake St./Nichols Rd.	1,4183/860	476/1,336	595/624	441/723	2,929/3,542
Lakeshore Dr./Riverside Dr.	770/696	472/699	764/969	1,231/1,287	3,236/3,651
Collier Av./Central Av.	465/710	1,113/1,412	197/665	1,691/1,459	3,466/4,245
Driveway 1/Nichols Rd.	525/522	703/611	1,589/2,784	2,212/1,824	5,030/5,741

(Urban Crossroads, 2018a, Table 3-13)

Threshold d: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Based on the Project's construction and operational characteristics, the Project only has the potential to result in odor emissions that could adversely affect a substantial number of people. There are no other potential sources of emissions associated with the Project that could adversely affect a substantial number of people, aside from the localized emissions that are addressed separately above under Threshold c. Land uses generally associated with odor complaints include: agricultural uses (livestock and farming); wastewater treatment plants; food processing plants; chemical plants; composting operations; refineries; landfills; dairies; and fiberglass molding facilities. The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and are thus considered less than significant. (Urban Crossroads, 2018a, pp. 42-43)

It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. There may also be intermittent odors associated with the gasoline service station, however any odors associated with the gasoline service station would also be governed by SCAQMD Rule 402 and best management practices. (Urban Crossroads, 2018a, p. 43)

Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required. (Urban Crossroads, 2018a, p. 43)

4.2.5 CUMULATIVE IMPACT ANALYSIS

Although Project-related construction and operational activities would not exceed the land use assumptions of the SCAQMD 2016 AQMP, Project-related construction emissions of NO_x and operational emissions of NO_x would exceed the SCAQMD Regional Thresholds. As such, the Project would result in a conflict with the



AQMP. Other developments within the SCAB region also have the potential to conflict with the AQMP; therefore, the Project's impacts due to a conflict with the AQMP would be cumulatively considerable.

Near-term construction activities and long-term operational activities would result in emissions of NO_x that exceed the SCAQMD Regional Thresholds. As such, prior to mitigation, during both construction and operation the Project would violate an air quality standard and would contribute substantially to an existing air quality violation, as NO_x is an ozone precursor. Additionally, the Project's construction and operational activities would result in a cumulatively considerable net increase of NO_x, a precursor to ozone, and the Project region is non-attainment for ozone. Accordingly, the Project's construction- and operational-related air quality emissions impacts would be cumulatively considerable.

Prior to mitigation, the Project's construction activities would exceed the SCAQMD LSTs for PM₁₀ and PM_{2.5}. Pursuant to SCAQMD guidance, projects that exceed the LSTs should be considered to have a direct and cumulatively-considerable impact to air quality. Accordingly, prior to mitigation, the Project's localized emissions of PM₁₀ and PM_{2.5} would be cumulatively considerable.

The Project does not propose any stationary sources of air quality emissions, and therefore would result in a less-than-cumulatively considerable impact to sensitive receptors during long-term operations. Additionally, the Project would not result in or contribute to any CO "Hot Spots"; therefore, impacts due to CO "Hot Spots" would be less-than-cumulatively considerable.

The Project does not involve any uses that would produce substantial amounts of odors. Construction-related odors would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less-than-cumulatively considerable. The Project and cumulative developments in the surrounding areas would be required to comply with the City's solid waste regulations (or similar regulations of surrounding jurisdictions), and must also comply with SCAQMD Rule 402, both of which would ensure that long-term operational odor impacts are less-than-cumulatively considerable.

4.2.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a.: Significant Direct and Cumulatively-Considerable Impact. Although the Project's construction and operational characteristics would not exceed the growth assumptions of the SCAQMD 2016 AQMP, air quality emissions during both construction and operation would result in emissions of NO_x that exceed the SCAQMD's Regional Thresholds. As such, the Project's emissions of NO_x during both construction and long-term operations represents a significant direct and cumulatively-considerable impact due to a conflict with the AQMP.

Threshold b.: Significant Direct and Cumulatively-Considerable Impact. Construction and operational emissions associated with the proposed Project would exceed the SCAQMD Regional Thresholds for NO_x. Accordingly, prior to mitigation the Project's construction and operational emissions would violate an applicable air quality standard and would contribute substantially to an existing air quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project's construction and operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-



attainment (i.e., ozone). Accordingly, the Project's impacts would be significant on both a direct and cumulatively-considerable basis prior to mitigation.

Threshold c.: Significant Direct and Cumulatively-Considerable Impact. Although long-term operational-related air quality emissions would not significantly affect sensitive receptors and the Project would not result in or contribute to a CO "Hot Spot," the Project's localized emissions of PM₁₀ and PM_{2.5} during construction would exceed the SCACMD LSTs for these pollutants. Accordingly, prior to mitigation, the Project's emissions of PM₁₀ and PM_{2.5} during construction represent a direct and cumulatively-considerable impact of the Project.

Threshold d.: Less-than-Significant Impact. During both construction and operation, the Project would not create objectionable odors affecting a substantial number of people. Impacts due to odors would be less than significant.

4.2.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

The following are standard project design requirements within the City of Lake Elsinore. Although these requirements technically do not meet CEQA's definition for mitigation, they are imposed herein to ensure Project compliance with applicable project design and regulatory requirements. Note that the Project would comply with the most up-to-date regulatory conditions and requirements as appropriate.

- The Project is required to comply with the provisions of SCAQMD Rule 403, "Fugitive Dust" by implementing the following dust control measures during construction activities, such as earth moving activities, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the City shall verify that the following notes are included on the grading plan. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.
 - All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
 - The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the midmorning, afternoon, and after work is done for the day.
 - The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 mph or less.
- The Project is required to comply with the provisions of SCAQMD Rule 113, *Table of Standards*, by requiring that all architectural coatings must consist of low VOCs (i.e., VOCs of less than 100 grams per liter [g/L]) unless otherwise specified in the SCAQMD Table of Standards.



- The Project is required to comply with applicable SCAQMD rules for construction activities on the Project site. SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1403 (Asbestos); Rule 1113 (Architectural Coatings); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust); and Rule 1186 / 1186.1 (Street Sweepers).
- The Project is required to comply with the provisions of SCAQMD Rule 402, “Nuisance” which requires that a person shall not discharge air contaminants or other materials that would cause health or safety hazards to any considerable number of persons or the public.
- The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development.
- The Project has been designed to provide pedestrian connections along selected roads and trails within the development to provide access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.
- The Project is designed to accommodate a mix of uses (i.e., residential, commercial, and recreational land uses) which would serve to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips.

Mitigation

MM 4.2-1 Prior to grading permit issuance, the City of Lake Elsinore shall verify the following note is included on the grading plan. Project contractors shall be required to ensure compliance with the note and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.

- *“During grading activities, all construction equipment greater than 150 horsepower shall consist of off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards. The construction contractor also shall ensure all equipment is tuned and maintained in accordance with the manufacturer’s specifications. The construction contractor shall keep a log of all applicable construction equipment demonstrating compliance with these requirements, and the log shall be made available for inspection by City of Lake Elsinore staff upon request.”*

4.2.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a.: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. No feasible mitigation measures exist to reduce the Project’s emissions of NO_x to below the applicable SCAQMD Regional Thresholds of significance. During construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project



Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. Accordingly, the Project's significant direct and cumulatively-considerable impact due to a conflict with the SCAQMD 2016 AQMP would be significant and unavoidable.

Threshold b.: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Project construction- and operational-related air quality emissions would exceed the Regional Thresholds established by the SCAQMD for NO_x. As noted above, during construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. Accordingly, the Project would result in unavoidable direct and cumulatively-considerable impacts due to projected violations of an applicable air quality standard (NO_x) and the Project's substantial contribution to an existing air quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project's construction and operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-attainment (i.e., ozone); this also represents a significant and unavoidable direct and cumulatively-considerable impact of the proposed Project.

Threshold c: Less-than-Significant Impact with Mitigation Incorporated. Table 4.2-12, *Localized Significance Summary – Construction (With Mitigation)*, summarizes the Project's localized emissions during construction following implementation of applicable regulations and design requirements as well as compliance with Mitigation Measure MM 4.2-1. As shown, construction-related emissions would not exceed the SCAQMD LSTs for any criteria pollutant during construction after mitigation. Accordingly, implementation of the required mitigation would reduce the Project's localized construction-related impacts to sensitive receptors to below a level of significance.

Table 4.2-12 Localized Significance Summary – Construction (With Mitigation)

On-Site Site Preparation Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	27.05	30.31	8.90	4.99
SCAQMD Localized Threshold	303	1,339	10	6
Threshold Exceeded?	NO	NO	NO	NO
On-Site Mass Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	33.97	40.40	5.14	2.79
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO
On-Site Phase 1 Fine Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	34.02	40.46	5.14	2.79
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO
On-Site Phase 2 Fine Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	33.95	40.38	5.13	2.79
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO
On-Site Phase 3 Fine Grading Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	33.97	40.40	5.14	2.79
SCAQMD Localized Threshold	266	1,961	11	7
Threshold Exceeded?	NO	NO	NO	NO

(Urban Crossroads, 2018a, Table 3-10)



4.3 BIOLOGICAL RESOURCES

The analysis in this Subsection is based, in part, on information from the report titled “Biological Technical Report and Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for the Nichols Ranch Project” by VCS Environmental (herein VCS), dated September 2018. This report is included as *Technical Appendix C* to this EIR.

4.3.1 EXISTING CONDITIONS

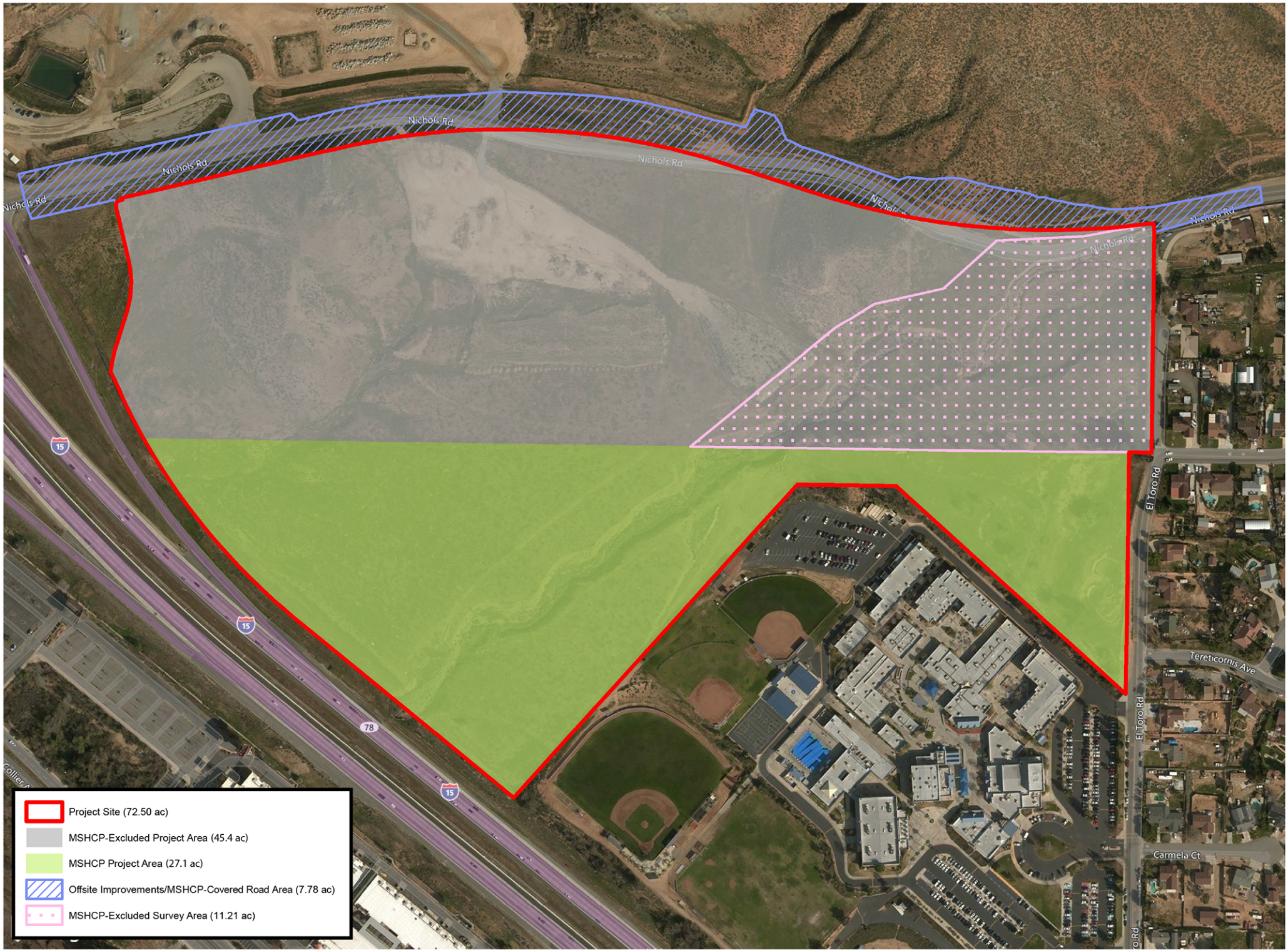
The following Subsection describes biological resources that are located within the Project’s Study Area. The Project’s Study Area includes on- and off-site areas that would be impacted by grading and development activities, as shown on EIR Figure 3-14, *Proposed Physical Disturbances*.

Under existing conditions, the Project site is mainly vacant. The northern 45.4 acres of the Project site are currently undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). Reclamation activities include grading and benching of slopes subject to mining, implementation of erosion control measures, and restoration of the site to a more natural appearance. The southern 27.1 acres of the Project site are mainly vacant and undeveloped. The southwest portion of the site contains Stovepipe Creek, which traverses the site in a northeast-to-southwest orientation.

The Project area is within the boundaries of the Riverside County Multiple Species Habitat Conservation Plan (MSHCP), which is a comprehensive habitat conservation/planning program for Western Riverside County. Refer to Subsection 4.3.2 for more information regarding the MSHCP. Under existing conditions, the northern 45.4 acres of the Project site are exempted from the MSHCP pursuant to a Memorandum of Understanding (MOU) and Settlement Agreement (“Agreement”) between the prior landowner and Riverside County Redevelopment Agency in 2004. Throughout this Subsection the northern 45.4 acres of the Project site that are not subject to MSHCP requirements are referred to as the “MSHCP-Excluded Area.” Within the 45.4-acre MSHCP-Excluded Area, approximately 34.2 acres of the site are undergoing active reclamation activities; thus, biological surveys only were required for the eastern 11.2 acres of the MSHCP-Excluded Area that are not subject to on-going reclamation activities. The biological resources located in the northern 45.4 acres of the Project site are still subject to regulatory administration by the federal government, State of California, and City of Lake Elsinore as detailed throughout this subsection. The southern 27.1 acres of the Project site are subject to the requirements of the MSHCP and are referred to herein as the “MSHCP Project Area.” The off-site improvements associated with the construction of Nichols Road are covered under the MSHCP and are referred to herein as the “MSHCP-Covered Road Area.” Figure 4.3-1, *Project Area Boundaries*, shows the boundaries of the overall Project Study Area, MSHCP-Excluded Area (including the 11.2 acres that were subject to biological surveys), and MSHCP Project Area.

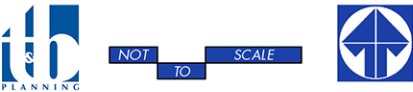
A. Vegetation Communities

The Project’s biological technical report (*Technical Appendix C*) documents the botanical resources at the Project site and off-site improvement areas (herein, “Project Study Area”) based on a literature search; a list of target special-status plant species and sensitive vegetation communities that could occur within the Project area; general field reconnaissance surveys; vegetation mapping; and habitat assessments and focused surveys



Source(s): VCS Environmental (September 2018)

Figure 4.3-1



PROJECT AREA BOUNDARIES

for special status species (pursuant to MSHCP requirements). Under existing conditions, the Project site is mainly vacant. The northern 45.4 acres of the Project site are undergoing mining reclamation activities pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). The Project site includes an earthen drainage feature that conveys storm water flows entering the Project site by two corrugated metal culverts located at the eastern boundary. The Project site is vegetated with non-native grassland, Riversidean sage scrub, disturbed Riversidean sage scrub, disturbed Riversidean sage scrub – encelia dominant, Riversidean alluvial fan sage scrub, ruderal, ornamental, open streambed, disturbed/developed, and ornamental vegetation. Table 4.3-1, *Summary of Study Area Vegetation Communities*, provides a summary of the existing vegetation communities occurring within the Project's Study Area, while the location of each vegetation community is depicted on Figure 4.3-2, *Vegetation Map*. (VCS, 2018, p. 3)

Table 4.3-1 Summary of Study Area Vegetation Communities

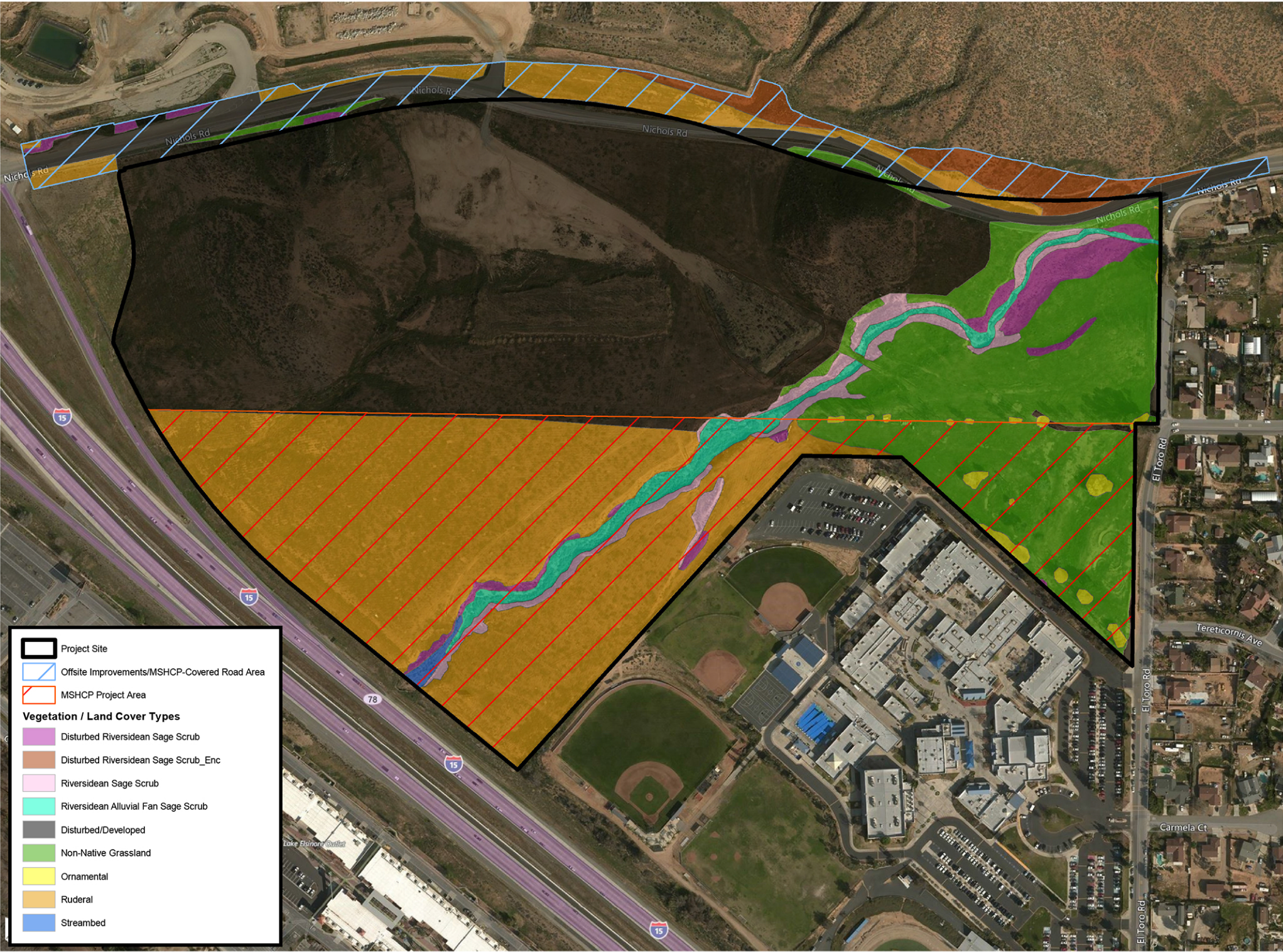
Vegetation Communities	Project Site Acreage			Offsite Improvements Acreage	Total (Onsite + Offsite)
	MSHCP Project Area	MSHCP-Excluded Project Area	Total Project Site		
Non-native grassland	5.21	6.58	11.79	0.32	12.11
Ruderal	18.72	0.14	18.86	2.25	21.11
Riversidean Sage Scrub	0.63	1.02	1.65	0	1.65
Disturbed Riversidean Sage Scrub	0.31	0.99	1.30	0.18	1.48
Riversidean Alluvial Fan Sage Scrub	1.07	0.61	1.68	0	1.68
Disturbed Riversidean Sage Scrub – Encelia dominant	0	0.14	0.14	1.59	1.73
Open Streambed	0.14	0	0.14	0	0.14
Disturbed/Developed	0.54	35.93	36.47	3.44	39.91
Ornamental	0.38	0.09	0.47	0	0.47
TOTAL	27.00	45.50	72.50	7.78	80.28

(VCS, 2018, Table 1)

A description of the vegetation communities occurring on-site and within off-site improvement areas is provided below:

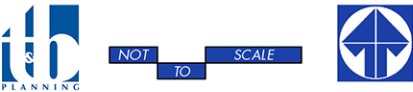
1. Non-Native Grassland

A total of 11.79 acres of non-native grassland habitat was mapped within the Project site and 0.32 acre within the off-site improvement area. The non-native grassland habitat is characterized by weedy non-native annual herbaceous species with a low density of weedy native species intermixed. Much of the non-native grassland habitat appears to be subject to annual disking. Non-native species within the habitat include red-stem filaree (*Erodium cicutarium*), cheeseweed (*Malva parviflora*), Russian thistle (*Salsola tragus*), London rocket



Source(s): VCS Environmental (September 2018)

Figure 4.3-2





(*Sisymbrium irio*), shortpod mustard (*Hirschfeldia incana*), tumble pigweed (*Amaranthus albus*), oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), cheatgrass (*Bromus tectorum*), and false barley (*Hordeum murinum*). Native species within the habitat include doveweed (*Croton setigerus*), common fiddleneck (*Amsinckia intermedia*), and vinegar weed (*Trichostema lanceolatum*). Occasional small California sagebrush (*Artemisia californica*), brittlebush (*Encelia farinosa*), and California buckwheat (*Eriogonum fasciculatum*) were observed within the habitat. (VCS, 2018, p. 15)

2. Ruderal

A total of 18.86 acres of ruderal land and associated plant species was observed within the Project site and 2.25 acres within the off-site improvement area. The ruderal land type was identified within the southwestern portion of the Project site as well as north of and adjacent to Nichols Road. The area includes primarily weedy, non-native species such as Russian thistle and mustard, and appears to be regularly disturbed by mowing, disking, or other vegetation maintenance activities. Occasional native species within the land type include small scattered grassland pinebush, vinegar weed, and doveweed. This area mostly lacks non-native grasses, which is one main distinguishing factor from the non-native grassland vegetation community. (VCS, 2018, p. 15)

3. Riversidean Sage Scrub

A total of 1.65 acres of Riversidean sage scrub was identified within the Project site. The Riversidean sage scrub is found primarily on the gently sloping and steep banks adjacent to the drainage channel as well as in a small area south of the drainage feature. Species observed within this habitat on-site include California sagebrush, California buckwheat, brittlebush, deerweed (*Acmispon glaber*), white sage (*Salvia apiana*), jimson weed (*Datura wrightii*), and grassland pinebush (*Ericameria palmeri* var. *pachylepis*). The understory was composed of mostly herbaceous species including native dove weed as well as weedy, non-native red-stem filaree, shortpod mustard, and brome grasses. (VCS, 2018, p. 15)

4. Disturbed Riversidean Sage Scrub

A total of 1.30 acres of disturbed Riversidean sage scrub was identified within the Project site and 0.18 acre within the off-site improvement area. The disturbed Riversidean sage scrub is found in areas adjacent to the drainage channel on the gently sloping banks as well as slopes somewhat removed from the drainage channel. Vegetation observed within this habitat is predominantly a high density of weedy native and non-native annual herbaceous species such as doveweed, red-stem filaree, shortpod mustard, and brome grasses with sparse and small Riversidean sage scrub shrubs throughout including California sagebrush, California buckwheat, brittlebush, grassland pinebush, and deerweed. It appears the areas of disturbed Riversidean sage scrub may experience regular disturbance, such as annual disking, explaining why the shrubs are small and sparse. (VCS, 2018, pp. 15-16)

5. Riversidean Alluvial Fan Sage Scrub

A total of 1.68 acres of Riversidean alluvial fan sage scrub was mapped within the Project site. This habitat is associated with the sandy/gravelly bottomed ephemeral wash within the channel that bisects the Project site. Dominant species in this habitat include scalebroom (*Lepidospartum squamatum*) and California buckwheat. Additional species observed within the habitat include brittlebush, California sagebrush, deerweed, and white



sage. The understory was composed of mostly weedy non-native herbaceous species such as red-stem filaree, shortpod mustard, and brome grasses. (VCS, 2018, p. 16)

6. Disturbed Riversidean Sage Scrub – Encelia Dominant

A total of 0.14 acre of disturbed Riversidean sage scrub – encelia dominated was mapped within the Project site and 1.59 acres within the off-site improvement area. This habitat is located on the slopes found along the northern edge of the off-site improvement area within the future Nichols Road right-of-way. Vegetation observed within the habitat consists of high density weedy, non-native mustard, as well as a low to moderate density of scattered native brittlebush. Additional native species in this habitat include valley cholla (*Cylindropuntia californica* var. *parkeri*), doveweed, and California buckwheat. (VCS, 2018, p. 16)

7. Open Streambed

A total of 0.14 acre of open streambed are located within the downstream portion of the on-site drainage channel. The open streambed is composed of sandy wash substrate and is essentially void of vegetation. This area is wider than other section of open sandy wash; there are narrow sections of open sandy wash that are included in the Riversidean alluvial fan sage scrub habitat since the width is small and it is considered part of that habitat type. (VCS, 2018, p. 16)

8. Disturbed/Developed

A total of 36.47 acres of the land within the Project site and 3.44 acres within the off-site improvement area is considered disturbed/developed. Disturbed/developed habitat includes areas of bare ground (e.g. dirt roads), paved roads, active mine/reclamation activities (construction/grading), and other built facilities. (VCS, 2018, p. 16)

9. Ornamental

A total of 0.47 acre of ornamental vegetation was identified within the Project site. The ornamental vegetation includes a few trees along the eastern boundary including regrowth of Peruvian peppertrees (*Schinus molle*) near Nichols Road and the northeastern corner of the site, the canopy of adjacent landscaping trees including eucalyptus (*Eucalyptus* sp.), pine (*Pinus* sp.), palo verde (*Parkinsonia* sp.), and Mexican fan palm (*Washingtonia robusta*), as well as in the southeastern portion of the site including Peruvian peppertrees, eucalyptus, olive (*Olea europaea*), tamarisk (*Tamarix aphylla*), jacaranda (*Jacaranda* sp.), and African sumac (*Rhus lancea*). (VCS, 2018, pp. 16-17)

B. Critical Habitat

The United States Fish and Wildlife Service's (USFWS) online service for information regarding Threatened and Endangered Species Final Critical Habitat designation within California was reviewed to determine if the Project occurs within any species' designated Critical Habitat. Portions of the Project site (particularly the MSHCP-Excluded Project Area) and the Offsite Improvements Area occur within designated Coastal California Gnatcatcher Critical Habitat, as shown on Figure 6 of the Project's Biological Technical Report (*Technical Appendix C*). (VCS, 2018, p. 17)



C. Special Status Vegetation Communities

The California Natural Diversity Database (CNDDB) did not identify any special-status vegetation communities within two miles of the Survey Area. The Special Status Plant Species Survey report (included as Appendix D to *Technical Appendix C*) notes three special status plant communities on-site including Riversidean sage scrub, Riversidean alluvial fan sage scrub, and ephemeral wash. The areas of exposed sandy ephemeral wash are included within the habitat designation of Riversidean alluvial fan sage scrub, and open streambed in the Project's Biological Technical Report (*Technical Appendix C*). (VCS, 2018, p. 17)

D. Sensitive Plant Species

Sensitive plant species include federally- or state-listed threatened or endangered species, and those species listed on the California Native Plant Society's rare and endangered plant inventory. Species with the potential to occur on site were analyzed based on distribution, habitat requirements, and existing site conditions, and are listed in Appendix G of *Technical Appendix C*. Focused surveys for special status plant species were conducted in spring 2017 within the MSHCP-Excluded Survey Area of the Project site only. No sensitive plant species were observed within the MSHCP-Excluded Survey Area during the focused plant surveys in 2017. One sensitive plant species, Robinson's peppergrass, was observed just north of the Project site (north of Nichols Road) within the MSHCP-Covered Road Area during the focused plant surveys. No additional sensitive plant species were observed within the southern portion of the Project site area (which is subject to the MSHCP) during the general survey of the area performed on December 8, 2017. While suitable habitat exists on-site for many of the plant species listed in Appendix G of *Technical Appendix C*, there is relatively low potential for occurrence based on the lack of observation during the 2017 focused plant surveys (in the MSHCP-Excluded Survey Area) and disturbed nature within a majority of the site. (VCS, 2018, pp. 17-18)

E. Sensitive Wildlife Species

Sensitive wildlife species include the following classifications: federally or state listed threatened or endangered species, California species of special concern, fully protected, and protected species (as designated by CDFW). Species with the potential to occur on-site were analyzed based on distribution, habitat requirements, and existing site conditions. VCS identified two special-status animal species at the Project site: coastal whiptail and coast horned lizard. Both are species are California species of special concern and were observed during the June 1, 2017 survey and focused plant surveys, respectively, within the MSHCP-Excluded Survey Area of the Project site. (VCS, 2018, pp. 18-19)

Based on focused surveys conducted on the Project site in 2017, VCS determined that the MSHCP-Excluded Survey Area was not occupied by Quino checkerspot butterfly (QCB) or coastal California gnatcatcher (CAGN). During burrowing owl surveys in 2018, CAGN were incidentally observed. However, since the 2017 focused surveys determined the MSHCP-Excluded Survey Area to be unoccupied, the incidental observations in 2018 support the condition of CAGN potentially dispersing through the MSHCP-Excluded Project Area to the MSHCP Project Area. (VCS, 2018, p. 18)

The MSHCP-Project Area and MSHCP-Covered Road Area are not subject to QCB and CAGN focused surveys but are subject to burrowing owl (BUOW) focused surveys because the areas are included within the MSHCP. Suitable BUOW habitat is present within the MSHCP-Project Area and the 500 feet surrounding the



Survey Area. Focused BUOW surveys were conducted by VCS on May 22, June 26, July 12, and July 26. No BUOWs were observed within the Project site or off-site improvement area during the focused surveys. (VCS, 2018, pp. 18-19)

F. Wildlife Movement/Nesting/Maternity Roost

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. Corridors effectively act as links between different populations of a species. An increase in a population’s genetic variability is generally associated with an increase in a population’s health. The Project Study Area is located near and on the edge of a large contiguous area of open space and the Project site includes an incised drainage with native sage scrub habitat present. Therefore, there is the potential that the Project site provides some value in very local wildlife movement, such as dispersal and foraging. However, the Project site also is surrounded by residential and school development to the south and east, the Interstate 15 (I-15) freeway to the west, and intensive mining operations to the north. The off-site improvement area is largely developed and located within and along a well-used paved road. These conditions decrease the likelihood for the Project Study Area to function as a regional movement corridor or as a large-scale wildlife movement area. (VCS, 2018, pp. 19-20)

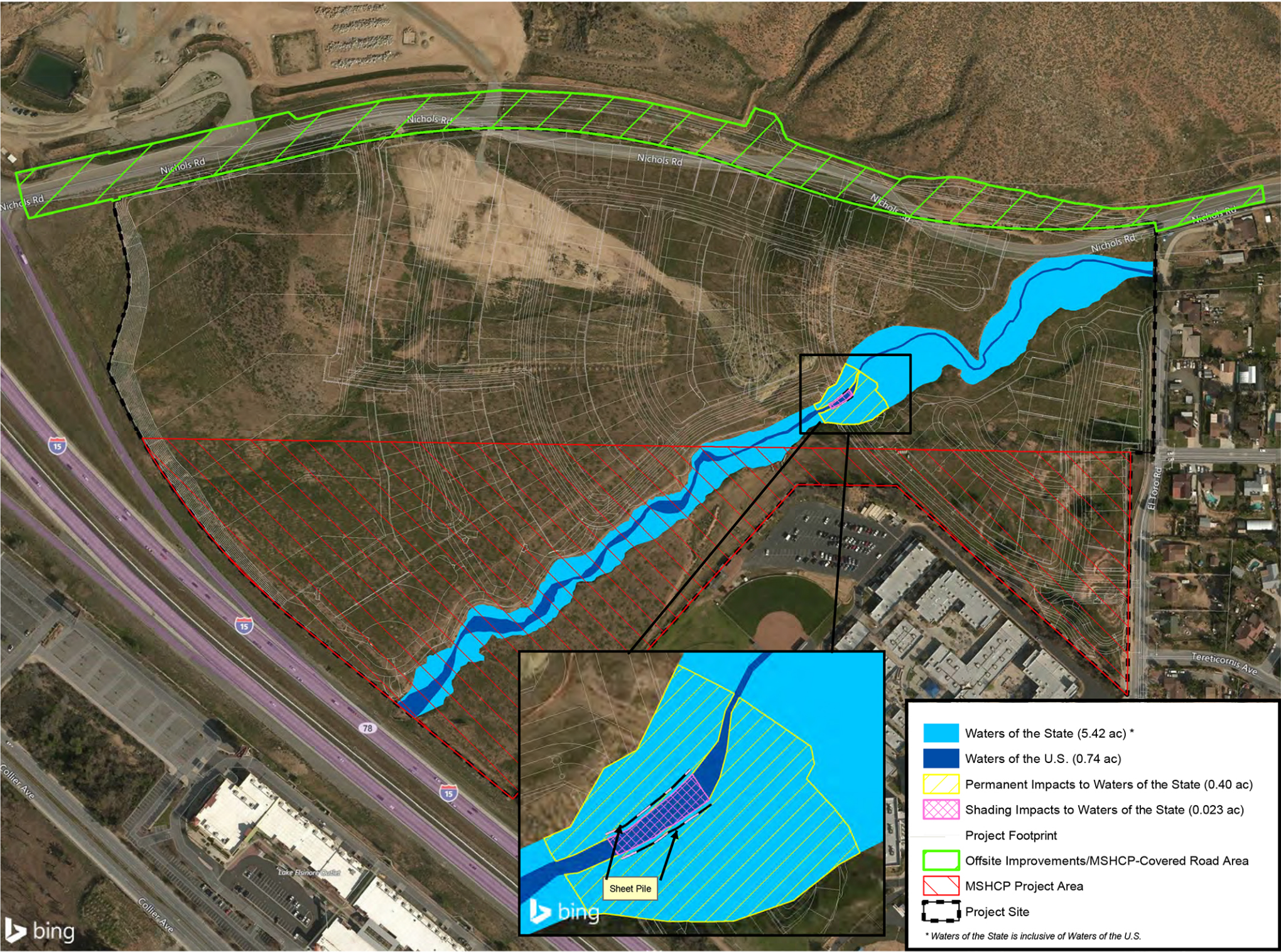
The Project site contains habitat including trees and shrubs that could support nesting birds and/or roosting bats, as common to any location containing such features. The off-site improvement area contains habitat that could support nesting birds. While a focused survey for bird nesting and bat roosting was not conducted at the time of the general biological survey and were not required, no active bird nests or bat maternity roosts were incidentally observed during the general biological surveys. (VCS, 2018, p. 20)

G. Jurisdictional Water and Wetlands

The Project Study Area was assessed for jurisdictional wetland and non-wetland Waters of the United States and Waters of the State. Jurisdictional non-wetland Waters of the United States are typically determined through the observation of an Ordinary High Water Mark (OHWM). Projects with impacts to Waters of the United States and non-wetland Waters of the United States are regulated under Sections 401 and 404 of the Clean Water Act through the ACOE and the Regional Water Quality Control Board (RWQCB). The California Department of Fish and Wildlife (CDFW) and RWQCB have jurisdiction over Waters of the State pursuant to Section 1602 of the California Fish and Game Code. (VCS, 2018, pp. 22-23)

1. ACOE/RWQCB Jurisdiction

The Project site contains Stovepipe Creek, which is an ephemeral drainage that bisects the Project site in a northeast-to-southwest alignment and is considered jurisdictional by the ACOE and RWQCB, as identified in Figure 4.3-3, *Jurisdictional Delineation Map*. This drainage contains approximately 0.74 acre of Waters of the United States subject to ACOE and RWQCB jurisdiction on site, as summarized in Table 4.3-2, *Waters of the United States*. No signs of wetlands were observed by VCS within Stovepipe Creek; therefore, the entire drainage is considered non-wetland Waters of the United States. There are no Waters of the United States within the off-site improvement area. (VCS, 2018, p. 22)



Source(s): VCS Environmental (September 2018)

Figure 4.3-3

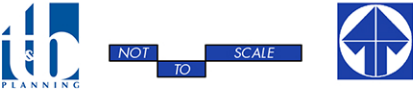




Table 4.3-2 Waters of the United States

Feature	Total Acreage
Non-wetland Waters of the US	0.74

(VCS, 2018, Table 2)

2. CDFW Jurisdiction

The Project site contains approximately 5.42 acres of CDFW jurisdiction, including 1.68 acres of Riversidean alluvial fan sage scrub habitat located within and along the adjacent banks of Stovepipe Creek, as shown in Figure 4.3-2 and Figure 4.3-3. There are no areas of CDFW jurisdiction within the off-site improvement area. Table 4.3-3, *Summary of CDFW Jurisdiction*, summarizes CDFW jurisdiction for the Project site. (VCS, 2018, p. 24)

Table 4.3-3 Summary of CDFW Jurisdiction

Feature*	Total Acreage
Total Waters of the State	5.42
Riversidean Alluvial Fan Sage Scrub	1.68

(VCS, 2018, Table 3)

H. MSHCP Riparian/Riverine Areas and Vernal Pools

The Project site is located within the Western Riverside County MSHCP. However, in 2004, the owners of the northern 45.4 acres of the Project site, along with other landowners, entered into a Settlement Agreement and Memorandum of Understanding (“Agreement”) with the County of Riverside which, among other things, explicitly exempted the northern 45.4 acres of the Project site from all provisions of the MSHCP. Although the northern 45.4 acres of the Project site are exempt from the MSHCP, the 45.4 acres are located within Cell Group W and includes Criteria Cell 4070 and a small portion of Criteria Cell 4067. Criteria Cells 4070 and 4067 are intended to conserve riparian scrub, woodland, and forest habitat associated Alberhill Creek and adjacent coastal sage scrub and grassland habitat, with conservation focused on 80-90 percent of the Cells in the northwestern portion of the Cells. However, the conservation criteria for Criteria Cells 4070 and 4067 would not apply because the northern 45.4 acres of the Project site are exempted from the requirements of the MSHCP. Information regarding the Criteria Cells is provided for informational purposes only. (RCA, 2003)

As a result of the Agreement, the MSHCP only applies to the southern 27.1 acres of the Project site. The southern 27.1 acres of the Project site are located within Criteria Cell 4169 and a small portion of Criteria Cell 4166. Cells 4166 and 4169 are stand-alone Cells that are not located within an MSHCP Criteria Cell Group. According to the MSHCP, Criteria Cell 4169 is intended for conservation of meadow and marsh habitat along Alberhill Creek and adjacent grassland habitat, with conservation focused on 10-20 percent of the Cell in the



southwest portion of the Cell. Criteria Cell 4166 is intended to conserve meadow, marsh, riparian scrub, woodland, and forest habitat along Alberhill Creek and adjacent grassland habitat, with conservation in 15-25 percent of the Cell focusing on the northeastern portion of the Cell. The southern 27.1 acres of the Project site are not located within the areas targeted for conservation in Criteria Cells 4166 or 4169. These areas of focus for conservation are located west of I-15. The southern 27.1 acres of the Project site are located on the east side of I-15 and are not located within or near Alberhill Creek. The 27.1 acres of the Project site is not designated as part of the MSHCP Reserve System, although individual MSHCP policies apply to the southern 27.1 acres of the site. (RCA, 2003)

1. ***Riparian/Riverine Areas***

The Project site contains approximately 2.26 acres of MSHCP-defined riparian/riverine areas as shown on Figure 4.3-4, *MSHCP Riparian/Riverine Areas Map*. These features do not support riparian habitat and only include riverine resources. No riparian/riverine areas are located within the off-site improvement areas for the proposed Project. Table 4.3-4, *Summary of MSHCP Riverine Areas*, summarizes MSHCP Riverine Areas for the Project site. (VCS, 2018, p. 24)

Table 4.3-4 Summary of MSHCP Riverine Areas

Feature	Total Acreage
Riverine	2.26
Riparian	0

(VCS, 2018, Table 4)

2. ***Vernal Pools***

No vernal pools or seasonal depressions were observed within the Project site or off-site improvement area. (VCS, 2018, p. 24)

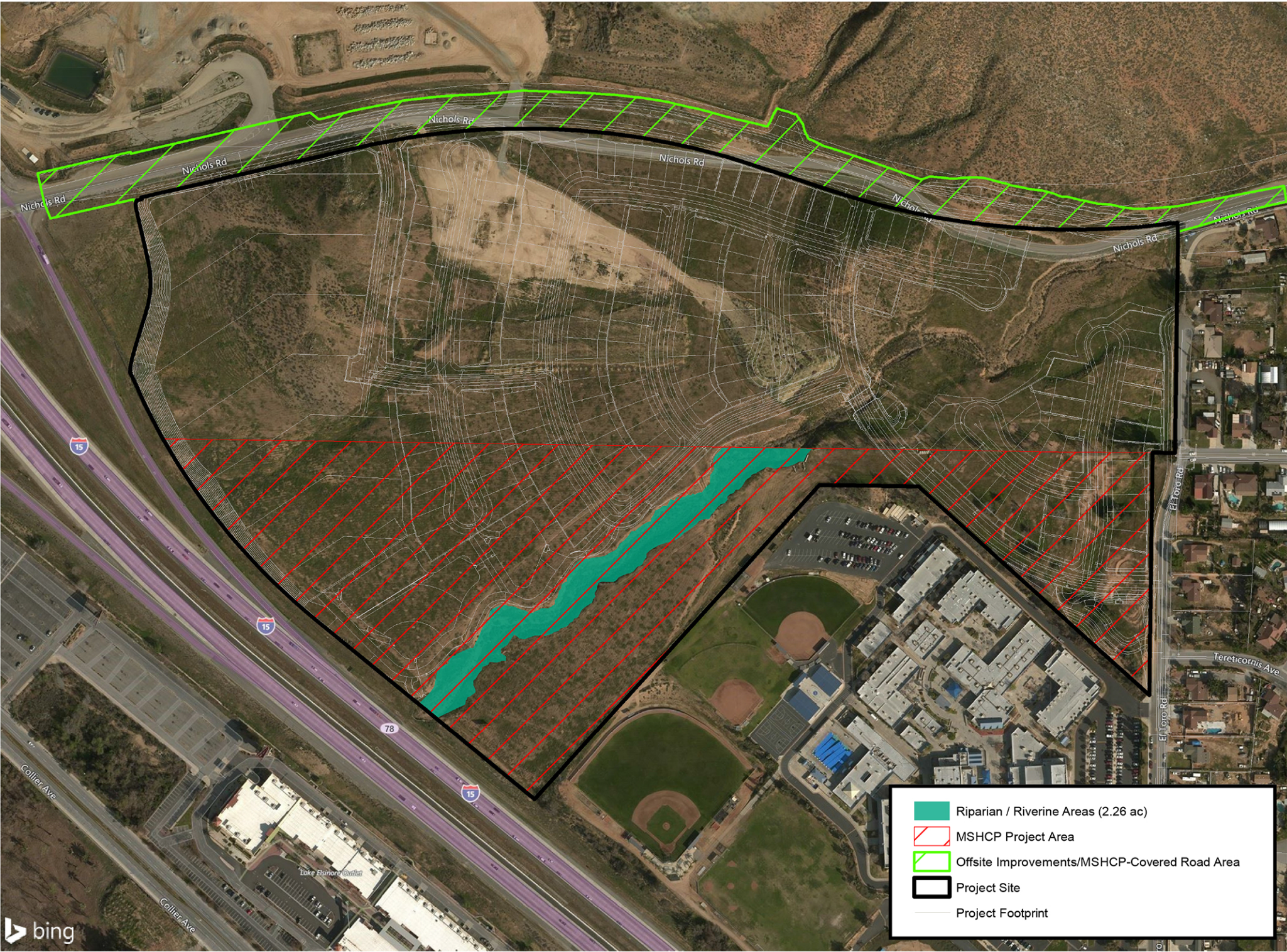
4.3.2 **APPLICABLE ENVIRONMENTAL REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws and related regulations governing the protection of biological resources.

A. **Federal Regulations**

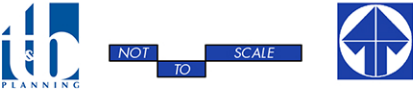
1. ***Endangered Species Act (ESA)***

The purpose of the federal Endangered Species Act (ESA) is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. Under the ESA, species may be listed as either



Source(s): VCS Environmental (September 2018)

Figure 4.3-4



MSHCP RIPARIAN/RIVERINE AREAS MAP



endangered or threatened. “Endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. (USFWS, 2013)

The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.” Listed plants are not protected from take, although it is illegal to collect or maliciously harm them on federal land. Protection from commercial trade and the effects of federal actions do apply for plants. (USFWS, 2013)

Section 7 of the ESA requires federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the USFWS and NMFS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. During consultation, the “action” agency receives a “biological opinion” or concurrence letter addressing the proposed action. In the relatively few cases in which the USFWS or NMFS makes a jeopardy determination, the agency offers “reasonable and prudent alternatives” about how the proposed action could be modified to avoid jeopardy. It is extremely rare that a project ends up being withdrawn or terminated because of jeopardy to a listed species. (USFWS, 2013)

Section 10 of the ESA may be used by landowners including private citizens, corporations, tribes, states, and counties who want to develop property inhabited by listed species. Landowners may receive a permit to take such species incidental to otherwise legal activities, provided they have developed an approved habitat conservation plan (HCP). HCPs include an assessment of the likely impacts on the species from the proposed action, the steps that the permit holder will take to avoid, minimize, and mitigate the impacts, and the funding available to carry out the steps. HCPs may benefit not only landowners but also species by securing and managing important habitat and by addressing economic development with a focus on species conservation. (USFWS, 2013)

2. *Clean Water Act Section 401*

Clean Water Act (CWA) § 401 water quality certification provides states and authorized tribes with an effective tool to help protect water quality, by providing them an opportunity to address the aquatic resource impacts of federally issued permits and licenses. Under § 401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the U.S. until the state or tribe where the discharge would originate has granted or waived § 401 certification. The central feature of CWA § 401 is the state or tribe’s ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit or license to be issued consistent with any conditions of the certification. Denying certification prohibits the federal permit or license from being issued. Waiver allows the permit or license to be issued without state or tribal comment. States and tribes make their decisions to deny, certify, or condition permits or licenses based in part on the proposed project’s compliance with Environmental Protection Agency (EPA)-approved water quality standards. In addition, states and tribes



consider whether the activity leading to the discharge will comply with any applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and other appropriate requirements of state or tribal law. (EPA, 2010, p. 1)

Many states and tribes rely on § 401 certification to ensure that discharges of dredge or fill material into a water of the U.S. do not cause unacceptable environmental impacts and, more generally, as their primary regulatory tool for protecting wetlands and other aquatic resources. However, § 401 is limited in scope and application to situations involving federally-permitted or licensed activities that may result in a discharge to a water of the U.S. If a federal permit or license is not required, or would authorize impacts only to waters that are not waters of the U.S., the activity is not subject to the CWA § 401. (EPA, 2010, p. 2)

3. *Clean Water Act Section 404*

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Wetlands subject to Clean Water Act Section 404 are defined as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities). (EPA, n.d.)

The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment; or (2) the nation’s waters would be significantly degraded. Applications for permits must, to the extent practicable: (1) demonstrate steps have been taken to avoid wetland impacts; (2) demonstrate that potential impacts on wetlands have been minimized; and (3) provide compensation for any remaining unavoidable impacts. Proposed activities are regulated through a permit review process. (EPA, n.d.)

An individual permit is required for potentially significant impacts. Individual permits are reviewed by the U.S. Army Corps of Engineers (ACOE), which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines. However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or State basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met. States also have a role in Section 404 decisions, through state program general permits, water quality certification, or program assumption. (EPA, n.d.)

4. *Executive Order 11990 – Protection of Wetlands*

The purpose of Executive Order (EO) 11990 is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, the



Order requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. (FEMA, 2018a) The Order applies to:

- Acquisition, management, and disposition of federal lands and facilities construction and improvement projects which are undertaken, financed, or assisted by federal agencies;
- Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. (FEMA, 2018a)

The procedures require the determination of whether or not the proposed project will be in or will affect wetlands. If so, a wetlands assessment must be prepared that describes the alternatives considered. The procedures include a requirement for public review of assessments. (FEMA, 2018a)

5. *Migratory Bird Treaty Act (16 USC Section 703-712)*

The Migratory Bird Treaty Act (MBTA) makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The migratory bird species protected by the MBTA are listed in 50 CFR 10.13. The USFWS has statutory authority and responsibility for enforcing the MBTA (16 USC 703-712). The MBTA implements Conventions between the United States and four countries (Canada, Mexico, Japan, and Russia) for the protection of migratory birds. (USFWS, 2017)

B. *State Regulations*

1. *California Endangered Species Act (CESA)*

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The California Department of Fish and Wildlife (CDFW) works with interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. CDFW may authorize the take of any such species if certain conditions are met. (CDFW, 2018a)

Section 2081 subdivision (b) of the California Fish and Game Code (CFGF) allows CDFW to authorize take of species listed as endangered, threatened, candidate, or a rare plant, if that take is incidental to otherwise lawful activities and if certain conditions are met. These authorizations are commonly referred to as incidental take permits (ITPs). (CDFW, 2018a)

If a species is listed by both the federal ESA and CESA, CFGF Section 2080.1 allows an applicant who has obtained a federal incidental take statement (federal Section 7 consultation) or a federal incidental take permit (federal Section 10(a)(1)(B)) to request that the Director of CDFW find the federal documents consistent with



CESA. If the federal documents are found to be consistent with CESA, a consistency determination (CD) is issued and no further authorization or approval is necessary under CESA. (CDFW, 2018a)

A Safe Harbor Agreement (SHA) authorizes incidental take of a species listed as endangered, threatened, candidate, or a rare plant, if implementation of the agreement is reasonably expected to provide a net conservation benefit to the species, among other provisions. SHAs are intended to encourage landowners to voluntarily manage their lands to benefit CESA-listed species. California SHAs are analogous to the federal safe harbor agreement program and CDFW has the authority to issue a consistency determination based on a federal safe harbor agreement. (CDFW, 2018a)

2. *Natural Community Conservation Planning Act (NCCP)*

CDFW's Natural Community Conservation Planning (NCCP) program takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program began in 1991 as a cooperative effort to protect habitats and species. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already declined in number significantly. (CDFW, 2018b)

An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Working with landowners, environmental organizations, and other interested parties, a local agency oversees the numerous activities that compose the development of an NCCP. CDFW and the U.S. Fish and Wildlife Service provide the necessary support, direction, and guidance to NCCP participants. (CDFW, 2018b)

There are currently 13 approved NCCPs (includes 6 subarea plans) and 22 NCCPs in the active planning phase (includes 10 subarea plans), which together cover more than 7 million acres and will provide conservation for nearly 400 special status species and a wide diversity of natural community types throughout California. (CDFW, 2018b)

3. *California Fish and Game Code, Section 1600, et seq.*

CFGF section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or (3) deposit debris, waste or other materials that could pass into any river, stream, or lake. The CFGF indicates that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2018c)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, 2018c)



4. *Native Plant Protection Act (NPPA) of 1977*

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. (CDFW, 2018d)

5. *Unlawful Take or Destruction of Nests or Eggs (CFGC Sections 3503.5-3513)*

Section 3503.5 of the CFGC specifically protects birds of prey, stating: “It is unlawful to take, possess, or destroy any . . . [birds-of-prey] or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Section 3513 of the CFGC duplicates the federal protection of migratory birds, stating: “It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.”

6. *Porter-Cologne Water Quality Act*

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of National Pollutant Discharge Elimination System (NPDES) permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. A number of statewide water quality control plans have been adopted by the State Water Board. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. Statewide and regional water quality control plans include enforceable prohibitions against certain types of discharges, including those that may pertain to nonpoint sources. Portions of water quality control plans, the water quality objectives and beneficial use designations, are subject to review by the EPA, when approved they become water quality standards under the CWA. (SWRCB, 2014)

C. Local Regulations

1. *Western Riverside County Multiple Species Habitat Conservation Plan*

The Project site is located within the Elsinore Area Plan portion of the Western Riverside County MSHCP, which is a comprehensive habitat conservation/planning program for Western Riverside County. However, in



2004, the owners of the northern 45.4 acres of the Project site, along with other landowners, entered into a Settlement Agreement and Memorandum of Understanding (“Agreement”) with the County of Riverside which, among other things, explicitly exempted the northern 45.4 acres of the Project site from all provisions of the MSHCP. Although the northern 45.4 acres of the Project site are exempt from the MSHCP, the 45.4 acres are located within Cell Group W and encompass portions of Criteria Cell 4070 and a small portion of Criteria Cell 4067. As a result of the Agreement, the MSHCP only applies to the southern 27.1 acres of the Project site. The southern 27.1 acres of the Project site are located within Criteria Cell 4169 and a small portion of Criteria Cell 4166. (RCA, 2003)

The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to special-status species and associated native habitats.

Through agreements with the USFWS and CDFW, the MSHCP designates 146 special-status animal and plant species as Covered Species, of which the majority have no project-specific survey/conservation requirements. The MSHCP provides mitigation for project-specific impacts to these species for Projects that are compliant/consistent with MSHCP requirements, such that the impacts are reduced to below a level of significance pursuant to CEQA.

The Covered Species that are not yet adequately conserved have additional requirements in order for these species to ultimately be considered “adequately conserved.” A number of these species have survey requirements based on a project’s occurrence within a designated MSHCP survey area and/or based on the presence of suitable habitat. These include Narrow Endemic Plant Species (MSHCP Volume I, Section 6.1.3), as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); Criteria Area Plant Species (MSHCP Volume I, Section 6.3.2) identified by the Criteria Area Plant Species Survey Areas (CAPSSA); animal species (BUOW, mammals, amphibians) identified by survey areas (MSHCP Volume I, Section 6.3.2); and species associated with riparian/riverine areas and vernal pool habitats (i.e., least Bell’s vireo, southwestern willow flycatcher, western yellow-billed cuckoo, and three species of listed fairy shrimp) (MSHCP Volume I, Section 6.1.2). An additional 28 species (MSHCP Volume I, Table 9.3) not yet adequately conserved have species-specific objectives in order for the species to become adequately conserved. However, these species do not have project-specific survey requirements.

As shown on Figure 4.3-5, *MSHCP Overlay Map*, the Study Area is not located within the MSHCP Criteria Area MSHCP NEPSSA, or the MSHCP CAPSSA. The Study Area also is not located within the MSHCP Mammal or Amphibian Survey Areas. However, the MSHCP Project Area is located within Criteria Cells 4166 and 4169 and located partially within the BUOW Survey Area.

Within the designated Survey Areas, the MSHCP requires habitat assessments, and focused surveys within areas of suitable habitat. For locations within the MSHCP Criteria Area with positive survey results, the MSHCP requires that 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular

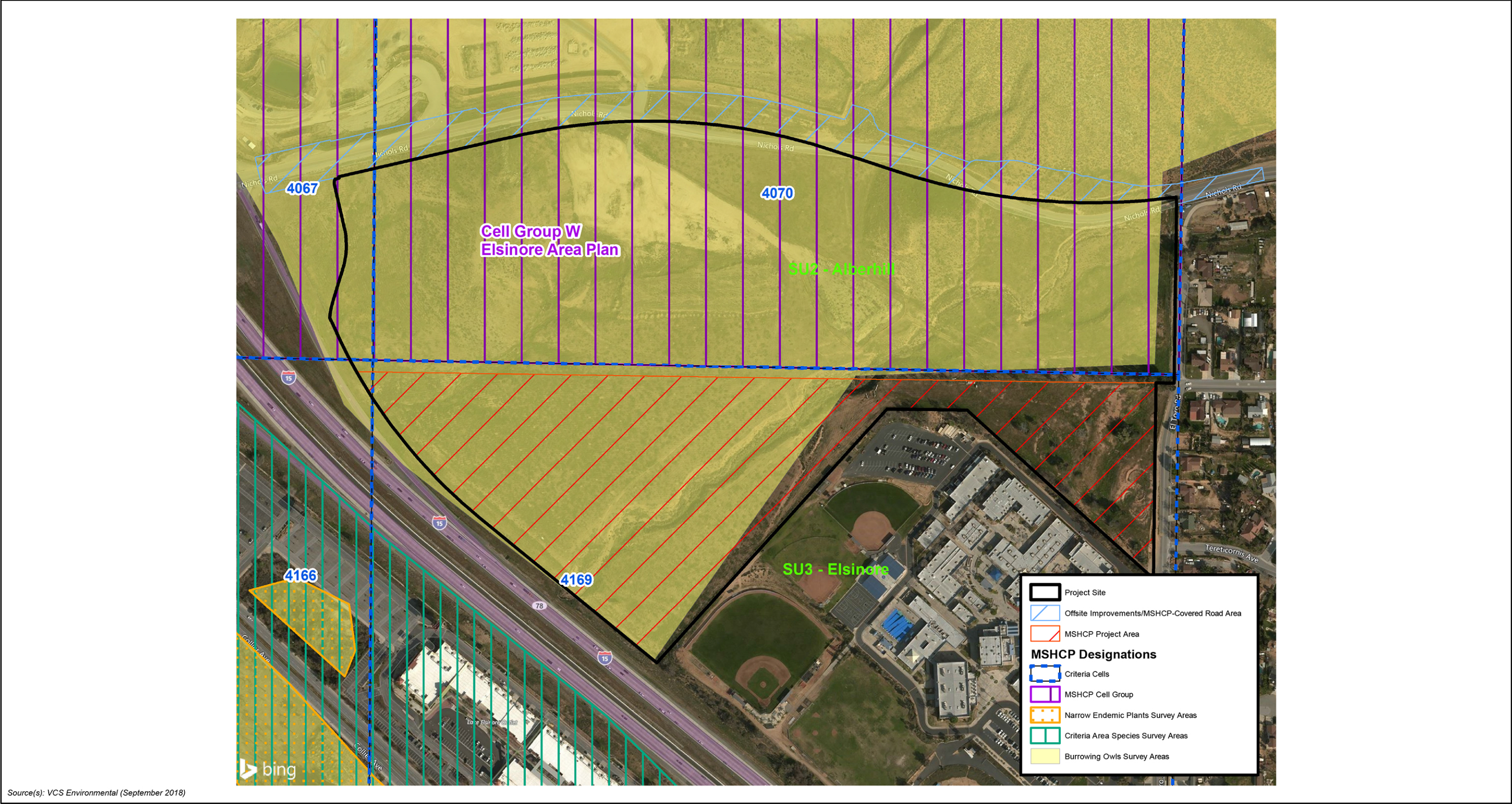


Figure 4.3-5



species have been met throughout the MSHCP. Findings of equivalency shall be made demonstrating that the 90-percent standard has been met, if applicable. If equivalency findings cannot be demonstrated, then “biologically equivalent or superior preservation” must be provided. Accordingly, the biological resources assessment entailed the performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA and the MSHCP; performance of a focused survey for the BUOW; and performance of a jurisdictional delineation of aquatic resources. All projects subject to the MSHCP must demonstrate compliance with applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, “Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;” Section 6.1.3, “Protection of Narrow Endemic Plant Species;” Section 6.1.4, “Guidelines Pertaining to the Urban/Wildland Interface;” and Section 6.3.2, “Additional Survey Needs and Procedures.” (VCS, 2018, p. 31)

2. *Stephen’s Kangaroo Rat Habitat Conservation Plan*

The SKR HCP was prepared under the direction of the Riverside County Habitat Conservation Agency (RCHCA) Board of Directors, in consultation with USFWS and CDFW. The City of Lake Elsinore is a member agency of the RCHCA. The 30-year SKR HCP was designed to acquire and permanently conserve, maintain and fund the conservation, preservation, restoration, and enhancement of Stephens’ kangaroo rat-occupied habitat. The SKR HCP covers approximately 534,000 acres within the member jurisdictions and includes an estimated 30,000 acres of occupied Stephens’ kangaroo rat habitat. The SKR HCP requires members to preserve and manage 15,000 acres of occupied habitat in seven Core Reserves encompassing over 41,000 acres. (RCHCA, n.d.)

On May 3, 1996, the USFWS issued a permit to the Riverside County Habitat Conservation Agency to incidentally take the federally endangered Stephens’ kangaroo rat (*Dipodomys stephensi*). Similarly, the CDFW issued a California Endangered Species Act Management Authorization for Implementation of the Stephens’ kangaroo rat on May 6, 1996. To date, more than \$50 million has been dedicated to the establishment and management of a system of regional preserves designed to ensure the survival of SKR in the plan area. This effort resulted in the permanent conservation of approximately 50% of the SKR-occupied habitat remaining in the HCP area. Through direct funding and in-kind contributions, SKR habitat in the regional reserve system is managed to ensure its continuing ability to support the species. Core reserves were deemed complete in December of 2003. (RCHCA, n.d.)

3. *City of Lake Elsinore Municipal Code Chapter 14.08*

Chapter 14.08 of the Lake Elsinore Municipal Code intends to protect and enhance the water quality of City watercourses, water bodies, groundwater, and wetlands in a manner pursuant to and consistent with the Federal Clean Water Act. (VCS, 2018, p. 7)

4. *City of Lake Elsinore Municipal Code Chapter 16.85*

Chapter 16.85 of the Lake Elsinore Municipal Code establishes a local development mitigation fee to be paid as part of the City’s implementation of the MSHCP. Fees are collected for any development within the City. (VCS, 2018, p. 7)



5. City of Lake Elsinore Municipal Code Chapter 19.04

Chapter 19.04 of the Lake Elsinore Municipal Code addresses the implementation of the SKR HCP in the City of Lake Elsinore. Chapter 19.04 requires all applicants for development permits within the boundaries of the SKR HCP area to pay an impact and mitigation fee. Chapter 19.04 states that no development permit for real property located within the boundaries of the SKR HCP area will be issued or approved without payment of the impact and mitigation fee and the submission of the biological survey as required by the code. (VCS, 2018, p. 7)

4.3.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to biological resources if the Project or any Project-related component would:

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

The above listed thresholds are derived directly from Section IV of Appendix G to the CEQA Guidelines and address typical adverse effects to biological resources (OPR, 2018).

4.3.4 IMPACT ANALYSIS

Threshold a: *Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species*



in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special Status Plants

During the field studies conducted within the Project's Study Area by VCS, one special-status plant species, Robinson's pepper-grass, was identified just north of the Project site (north of Nichols Road) within the MSHCP-Covered Road Area during the spring 2017 focused plant surveys. There were no other special status plant species identified within the MSHCP-Excluded Survey Area. Robinson's pepper-grass has a California Rare Plant Ranking (CRPR) ranking of 4.3, which means it is a watch list plant of limited distribution and "not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)." While Project implementation may impact Robinson's pepper-grass, impacts would be less than significant based on the species' low CRPR ranking. There is low or very low potential for other special status plants to occur on the Project site; therefore, impacts to special status plants would be less than significant. (VCS, 2018, p. 27)

Special Status Wildlife

During the field studies conducted within the Project's Study Area by VCS, two special status wildlife species, coastal whiptail and coast horned lizard, were observed in the MSHCP-Excluded Survey Area. Both species are California species of special concern. A majority of the habitat suitable for both species would be preserved on-site (i.e., Stovepipe Creek and associated habitat); therefore, potential impacts to the species would be limited. Potential impacts to habitat suitable for these species within the MSHCP-Excluded Project Area would be potentially significant prior to mitigation. Notwithstanding, the coastal whiptail and coast horned lizard are both covered species under the MSHCP; therefore, conservation of this species would be addressed on a regional level around the Project site on properties that are subject to the MSHCP. (VCS, 2018, p. 27)

Based on focused surveys conducted by VCS, QCB does not occupy the MSHCP-Excluded Project Area; therefore, no impact would occur to the QCB. Additionally, CAGN were not observed during 2017 focused surveys within the MSHCP-Excluded Project Area but have been incidentally observed within the Project site during focused burrowing owl surveys in 2018. However, because the 2017 focused surveys determined the MSHCP-Excluded Survey Area to be unoccupied and the incidental observations in 2018 in and adjacent to areas subject to an active mine reclamation operation support the condition of CAGN potentially dispersing through the MSHCP-Excluded Project Area to the MSHCP Project Area, no "take" is anticipated to occur. For these reasons, there is substantial evidence to support that the CAGN does not occupy the MSHCP-Excluded Project Area and no impacts to this species are expected within the MSHCP-Excluded Project Area. Additionally, Project compliance with the MSHCP within the MSHCP Project Area would address long-term conservation of the species on a regional scale. Impacts to the QCB and the CAGN would be less than significant. (VCS, 2018, pp. 27-28)

Several special status animal species have a moderate potential to occur within the Project Study Area within their respective suitable habitats as listed in Appendix G of *Technical Appendix C*. Most of these species are covered species under the MSHCP. An MSHCP Covered Species is a species that is conserved by MSHCP implementation. There are 146 Covered Species in the MSHCP, of which 40 species are identified as requiring additional surveys. Only two wildlife species with at least moderate potential to occur on the Project site are



not covered by the MSHCP: California glossy snake and coast patch-nosed snake, which are both CDFW Species of Special Concern. Neither of these species was observed on-site during field surveys conducted by VCS. Both species have moderate potential to occur on the Project site. Potential impacts to these species would be minimized through preservation of the majority of the suitable on-site habitat (i.e. Stovepipe Creek and associated habitat). Although these species were not observed on site, the Project would impact suitable habitat for these species within the MSHCP-Excluded Project Area; this is evaluated as a potentially significant impact for which mitigation, in the form of habitat-based mitigation, would be required. Because the MSHCP Project Area would comply with the MSHCP, which in turn would provide for the long-term conservation of habitat for these species, Project impacts to these species within the MSHCP Project Area would be less than significant. (VCS, 2018, p. 28)

Portions of the MSHCP Project Area and MSHCP-Covered Road Area are located within the MSHCP BUOW Survey Area, as shown previously in Figure 4.3-5. Suitable habitat was identified on the Project site and within the off-site improvement area. Focused surveys for the BUOW were conducted on May 22, June 26, July 12, and July 26, 2018. No BUOW or signs of BUOW were observed within the Project site, the off-site improvement area, or the surrounding 500-foot survey buffer. The MSHCP-Excluded Project Area occurs within the 500-foot survey buffer for the areas within the MSHCP Project Area and the Offsite Improvements Area subject to BUOW surveys. Even though the 2018 focused surveys were negative, the BUOW is migratory and has the potential to locate on the property prior to construction. A significant impact could occur if construction activities were to occur during the nesting season and if any BUOW individuals were present. (VCS, 2018, pp. 28-29)

Special Status Wildlife Critical Habitat

The northern portion of the Project Study Area falls within a designated CAGN Critical Habitat area under the federal Endangered Species Act, however, because the Project does not require federal agency actions or federally-funded or permitted activities, the Project is not subject to the Critical Habitat designation. Furthermore, a majority of the area identified as CAGN Critical Habitat occurs in the MSHCP-Excluded Project Area, which is undergoing reclamation activities for a previous mining operation that have disturbed or eliminated much of the potential CAGN habitat. Additionally, 2017 focused surveys were negative for the CAGN within the northern portions of the site not subject to reclamation activities. Incidental sightings of CAGN in 2018 are attributed to the species crossing the mine reclamation area to reach suitable habitat in the MSHCP Project Area. Therefore, Project impacts to CAGN Critical Habitat would be less than significant. (VCS, 2018, p. 27)

Nesting Birds, Bats, & Raptors

The Project site contains disturbed/maintained soils and habitat including several trees and shrubs that could support nesting birds and/or roosting bats. Due to the potential for onsite bird nesting and/or bat roosting, Project construction could result in impacts to nesting birds that would be in violation of the MBTA and CFGC and/or result in impacts to protected bat maternity roosts if construction activities are to take place during nesting or maternity roosting season or if a preconstruction nesting bird and roosting bat survey is not performed to clear the Project site prior to start of work. Thus, impacts would be potentially significant and require mitigation. (VCS, 2018, p. 29)



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

Potential impacts to vegetation communities/land cover types due to implementation of the proposed Project are shown in Figure 4.3-6, *Summary of Vegetation/Land Use Impacts*, and summarized in Table 4.3-5, *Summary of Vegetation/Land Use Impacts*. The proposed Project would permanently impact 2.58 acres of native vegetation types, including 0.38 acre of Riversidean sage scrub, 0.40 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 1.73 acres of disturbed Riversidean sage scrub-encelia dominant. Impacts to native vegetation types within the MSHCP Project Area and MSHCP-Covered Road Area would be less than significant due to compliance with the MSHCP in this portion of the Project site. However, for the MSHCP-Excluded Project Area, Project impacts to 0.23 acre of Riversidean sage scrub, 0.14 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 0.14 acres of disturbed Riversidean sage scrub-encelia dominant, would represent a significant impact for which mitigation would be required. (VCS, 2018, p. 26)

The Project also would result in direct impacts to non-native grassland, ornamental, ruderal, and disturbed/developed vegetation/land cover types are considered less than significant because these habitats/land covers are common in the surrounding vicinity and do not represent CNDDDB or CDFW sensitive plant communities. (VCS, 2018, p. 26)

Construction and operational activities within the Project Study Area could result in indirect impacts to the vegetation communities surrounding the directly impacted areas. Examples of indirect temporary impacts to plant communities include the effects of fugitive dust created by construction activities and the spread of invasive species. With development, “edges” of vegetation communities may be exposed and more susceptible to invasion by invasive species (introduced by planted landscaping, seed dispersal from cars, people, and/or pets, and/or wind). Construction-related erosion, runoff, sedimentation, soil compaction, and alteration of drainage patterns that may affect plants by altering Project site conditions so that the location in which they are growing becomes unfavorable are prohibited by federal and state laws. However, development of the entire Project site would be subject to a Stormwater Pollution Prevention Plan (SWPPP) that would include BMPs to implement during the construction process. A Project-specific Stormwater Quality Management Plan (WQMP) (including as *Technical Appendix I2* to this EIR) has been prepared to establish the post-construction BMPs that would be implemented with the development to mitigate impacts to post-construction runoff due to the Project. The proposed BMPs include an extended detention basin, two sand filter basins and implementation of standard LID practices. A final WQMP would be prepared and approved prior to construction. Thus, indirect impacts to riparian areas or sensitive habitats would be less than significant. (VCS, 2018, pp. 26-27)

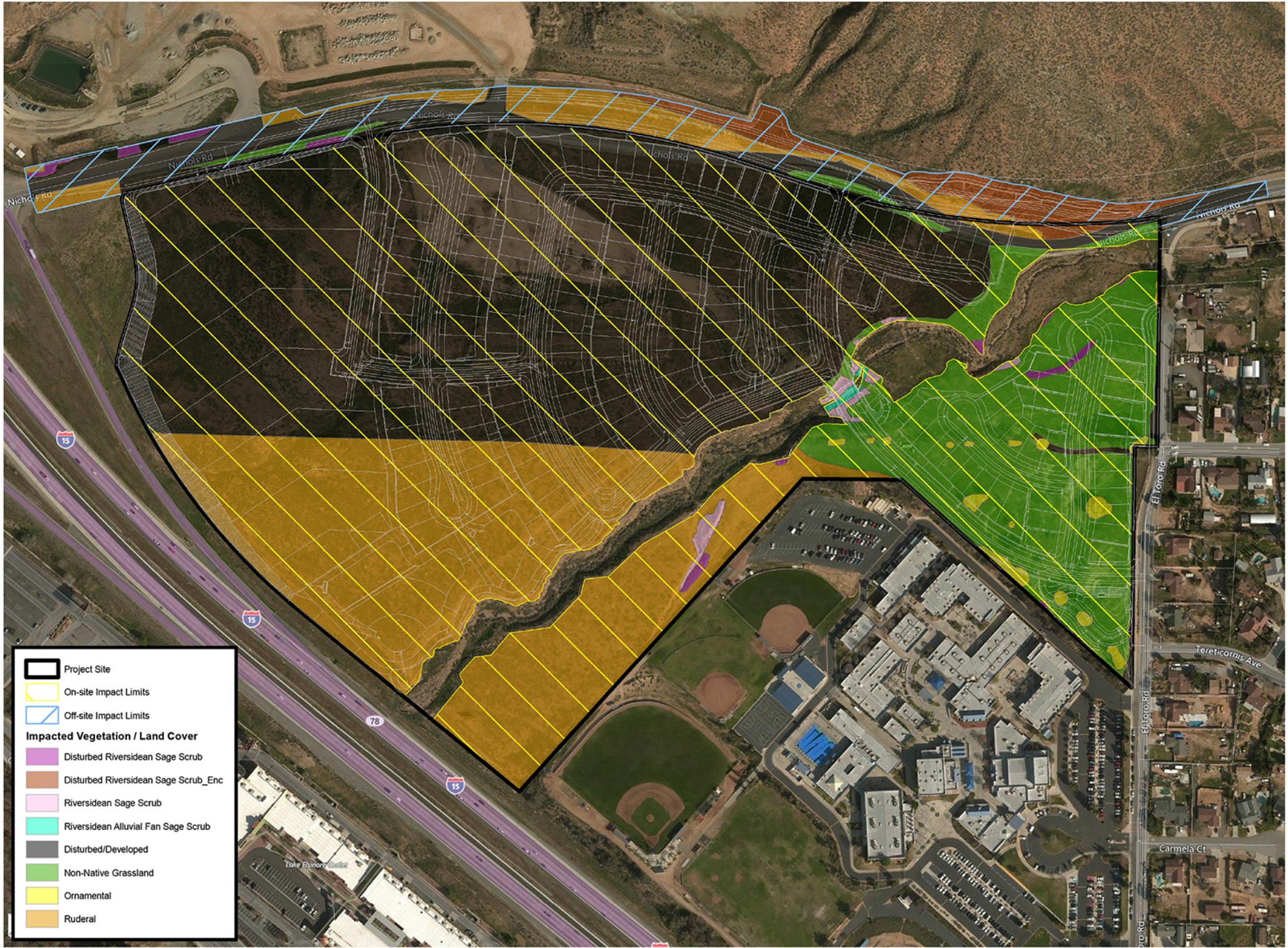
Implementation of the Project would not impact any riparian/riverine features within the MSCHP Project Area. Therefore, impacts to MSHCP sensitive riparian/riverine features would be less than significant. (VCS, 2018, p. 30)



Table 4.3-5 Summary of Vegetation/Land Use Impacts

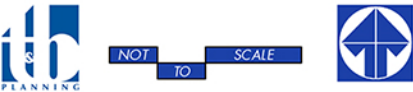
Vegetation Communities	Permanent Impacts				
	Project Site Impacts Acreage			Offsite Improvements Impacts Acreage	Total Impacts (Onsite + Offsite)
	MSHCP Project Area	MSHCP- Excluded Project Area	Total Project Site		
Non-native grassland	5.20	5.87	11.07	0.32	11.39
Ruderal	17.99	0.15	18.14	2.25	20.39
Riversidean Sage Scrub	0.15	0.23	0.38	0	0.38
Disturbed Riversidean Sage Scrub	0.08	0.14	0.22	0.18	0.40
Riversidean Alluvial Fan Sage Scrub	0	0.07	0.07	0	0.07
Disturbed Riversidean Sage Scrub – Encelia dominant	0	0.14	0.14	1.59	1.73
Open Streambed	0	0	0	0	0
Disturbed/Developed	0.53	35.77	36.30	3.44	39.74
Ornamental	0.38	0.09	0.47	0	0.47
TOTAL	24.33	42.46	66.79	7.78	74.57

(VCS, 2018, Table 5)



Source(s): VCS Environmental (September 2018)

Figure 4.3-6



SUMMARY OF VEGETATION/LAND USE IMPACTS



Threshold c: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

As discussed above in Subsection 4.3.1, VCS conducted a jurisdictional delineation within the Project's Study Area. The Project would not impact any of the area subject to USFWS and RWQCB jurisdiction located on-site. The Project site also contains MSCHP riparian/riverine features; however, the Project would not impact any of these features located within the MSHCP Project Area. Thus, no impact would occur to USFWS/RWQCB jurisdictional features located on the entire Project Study Area nor MSCHP riparian/riverine features located within the MSCHP Project Area. However, as shown in Table 4.3-6, *Project Impacts to Waters of the State*, the Project would impact 0.42 acre of CDFW and RWQCB jurisdiction including 0.07 acre of Riversidean alluvial fan sage scrub. Impacts to 0.42 acre of CDFW/RWQCB jurisdictional features would be significant. (VCS, 2018, pp. 29-30)

Table 4.3-6 Project Impacts to Waters of the State

Feature	Permanent Impacts (acres)	Shading Impacts (acres)	Total Impacts (acres)
Waters of the State	0.40	0.02	0.42
Riversidean alluvial fan sage scrub	0.07	0.00	0.07

(VCS, 2018, Table 7)

Threshold d: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site lacks migratory wildlife corridors and wildlife nursery sites and does not occur within any MSHCP Cores or Linkages. Due to the infrastructure and development surrounding the Project site, the potential for wildlife movement is decreased. Thus, it is unlikely that the Project Study Area functions in regional wildlife movement or regional wildlife corridors. However, the Project Study Area occurs within an area that may serve a function in local wildlife movement such as dispersal and foraging. The Project would preserve and avoid the on-site portion of Stovepipe Creek and preserve the majority of the sage scrub habitats located on-site which serve as local wildlife corridors. Thus, due to relatively small size of area in which vegetation removal would occur as part of the proposed Project and the built nature of the area surrounding the Project site, long-term effects to wildlife movement would be less than significant. Furthermore, a large area of open space exists north of the Project site that would continue to serve as a corridor for resident and migratory wildlife species in the Project vicinity; thus, effects to wildlife movement due to Project implementation would be less than significant. (VCS, 2018, p. 29)



Threshold e: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

EIR Section 4.9, *Land Use & Planning*, provides an extensive analysis of the Project's consistency with all applicable local and regional policies, and concludes that the Project would not result in any significant conflicts with any policy, including policies related to the protection of biological resources.

As previously noted, the Project Applicant would be required to pay SKR fees pursuant to Lake Elsinore Municipal Code Chapter 19.04.

For the southern 27.1 acres of the Project site, the Project Applicant would be required to pay MSHCP fees pursuant to Lake Elsinore Municipal Code Chapter 16.85. As previously noted, pursuant to a March 2004 Settlement Agreement and MOU signed between Riverside County and the former landowner, the northern 45.4 acres of the Project site are fully exempt from the provisions and requirements of the MSHCP. As such, the Project Applicant would be exempt from the fee requirements of Lake Elsinore Municipal Code Chapter 16.85 for the northern 45.4 acres of the site because the Project's impacts in the northern portions of the site would not be covered under the MSHCP. In lieu of paying fees pursuant to Chapter 16.85, the Project Applicant would be required to implement compensatory mitigation and other measures for impacts to the northern 45.4 acres of the site (refer to subsection 4.3.7). Based on the foregoing, the Project would not conflict with the provisions of Lake Elsinore Municipal Code Chapter 16.85, and impacts would be less than significant.

In addition, the City has in place a palm tree preservation program (Chapter 5.116 of the Lake Elsinore Municipal Code). The purpose of the program is for the protection of the City's plant life heritage for the benefit of all citizens in Lake Elsinore. All residents who wish to remove a significant palm tree, as defined in Chapter 5.116, that exceeds five feet in height measured from the ground at the base of the trunk to the base of the crown must obtain a palm tree removal permit prior to removal of the tree. However, no palm trees subject to Chapter 5.116 occur on site; thus, the Project would not conflict with the provisions of Lake Elsinore Municipal Code Chapter 5.116.

Threshold f: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project area is subject to two separate habitat conservation plans: the Stephens' Kangaroo Rat HCP and the Western Riverside County MSHCP. Each is discussed below.

A. Project Consistency with the SKR HCP

As previously noted, the SKR HCP was prepared under the direction of the RCHCA Board of Directors, in consultation with USFWS and CDFW. The City of Lake Elsinore is a member agency of the RCHCA. According to Figure S-1 of the SKR HCP, the Project site is not located within or adjacent to any SKR core reserve areas. Additionally, the Project Applicant would be required to contribute fees towards the establishment and long-term maintenance of the SKR HCP core reserve pursuant to Lake Elsinore Municipal



Code Chapter 19.04. The Project would not conflict with any provisions of the SKR HCP; thus, a less-than-significant impact would occur.

B. Project Consistency with the MSHCP

1. Project Compliance with MSHCP Cell Criteria

The Project site is located within the Elsinore Area Plan portion of the Western Riverside County MSHCP, which is a comprehensive habitat conservation/planning program for Western Riverside County. In 2004, the owners of the northern 45.4 acres of the Project site, along with other landowners, entered into a Settlement Agreement and Memorandum of Understanding (“Agreement”) with the County of Riverside which, among other things, explicitly exempted the Project site from all provisions of the MSHCP. As a result of the Agreement, the MSHCP only applies to the southern 27.1 acres of the Project site. Provided below is an analysis of consistency for the MSHCP Cell Criteria MSHCP Project Area, the MSHCP-Covered Road Area, and the MSHCP-Excluded Project Area

MSHCP-Covered Road Area– MSHCP Cell Criteria Consistency

The majority of the MSHCP-Covered Road Area is located within Criteria Cells 4070 and 4067 which are located within Cell Group W. However, the off-site improvements proposed by the Project are related to the realignment of Nichols Road, which is a covered road in the MSHCP; therefore, the MSHCP-Covered Road Area is not subject to Reserve Assembly requirements. (VCS, 2018, p. 31)

MSHCP Project Area – MSHCP Cell Criteria Consistency

The southern 27.1 acres of the Project site are located within the Criteria Cell 4169 and a small portion of Criteria Cell 4166. The southern 27.1 acres of the Project site are not located within an MSHCP Criteria Cell Group. According to the MSCHP, Criteria Cell 4169 intends to conserve meadow and marsh habitat along Alberhill Creek and adjacent grassland habitat, with conservation focused on 10-20 percent of the Cell focusing on the southwest portion of the Cell. Criteria Cell 4166 intends to conserve meadow, marsh, riparian scrub, woodland, and forest habitat along Alberhill Creek and adjacent grassland habitat, with conservation focused on 15-25 percent of the Cell focusing on the northeastern portion of the Cell. The southern 27.1 acres of the Project site are not located within the areas targeted for conservation in Criteria Cells 4166 or 4169. These areas of focus are located west of the I-15. The southern 27.1 acres of the Project site are located on the east side of the I-15 and are not located within or near Alberhill Creek. The 27.1 acres of the Project site are not designated as part of the MSHCP Reserve System, although individual MSHCP policies would apply to the proposed Project, as discussed below. Therefore, Project impacts due to a conflict with the MSHCP Cell Criteria within the southern 27.1 acres of the Project site would be less than significant. (RCA, 2003)

MSHCP-Excluded Project Area – MSHCP Cell Criteria Consistency

Although exempt from the MSHCP, the northern 45.4 acres of the site are located within Cell Group W and include Criteria Cell 4070 and a small portion of Criteria Cell 4067. Criteria Cells 4070 and 4067 would otherwise intend to conserve riparian scrub, woodland, and forest habitat associated Alberhill Creek and adjacent coastal sage scrub and grassland habitat, with conservation focused on 80-90 percent of the Cells focusing on the northwestern portion of the Cells.



Impacts to habitat, sensitive species, and jurisdictional areas within the MSHCP-Excluded Project Area would be mitigated to below a level of significance through the implementation of the mitigation measures identified in subsection 4.3.7, which includes a requirement for the Project Applicant to provide compensatory mitigation for site-specific impacts to 0.23 acre of Riversidean sage scrub, 0.14 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 0.14 acres of disturbed Riversidean sage scrub-encelia dominant. Additionally, the Project would require a Section 1600 Streambed Alteration Agreement from the CDFW, and would be required to comply with the RWQCB's Waste Discharge Requirements (WDR). Thus, the Project would provide direct mitigation for impacts to biological resources on-site and would not rely on the take coverage granted by the MSHCP. As such, payment of MSHCP fees is not required and would not serve to mitigate any of the Project's direct, indirect, or cumulatively-considerable impacts to biological resources.

However, the MSHCP-Excluded Project Area is located within Cell Group W and encompasses portions of Criteria Cell 4070 and a small portion of Criteria Cell 4067. Pursuant to the MSHCP, conservation within Cell Group W is intended to encompass 80%-90% of the Cell Group focusing in the northwestern portion of the Cell Group. The MSHCP-Excluded Project Area occurs in the eastern portion of Group W. Notwithstanding the fact that the mitigation identified in EIR Subsection 4.3.7 would reduce the Project's impacts to biological resources to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP would require the conservation of most or all of the MSHCP-Excluded Project Area, which inherently conflicts with the Project's primary objective to develop the site with residential, commercial, and recreational land uses. Moreover, mining and reclamation activities within the MSHCP-Excluded Project Area have fully disturbed most of the areas proposed for disturbance by the Project and that are intended for conservation under the MSHCP. Thus, even if the MSHCP-Excluded Project Area were to be conserved, the site still would not meet the objectives for Cell Group W and any preserved habitat would be disconnected from the portions of Cell Group W located west or north of the Project site due to the presence of I-15 and Nichols Road. The option of conserving the entire MSHCP-Excluded Project Area is considered as part of the No Project Alternative in EIR Subsection 6.3.1. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the site represent significant impacts of the proposed Project that cannot be mitigated to below a level of significance. However, because the vast majority of properties within the MSHCP area and that are subject to Chapter 16.85 of the Lake Elsinore Municipal Code (or other the implementing ordinance of other local jurisdictions) would be required to comply with the provisions of the MSHCP and all MSHCP-related requirements, the Project's non-compliance with the MSHCP would be less-than-cumulatively considerable.

2. *Project Consistency with MSHCP Requirements*

In addition to the Cell Criteria as discussed above, all projects must demonstrate compliance with applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protecting Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures." Additionally, because the Project includes roadway improvements within MSCHP Criteria Cells, the following section of MSHCP applies to the Project: Section 7.3.5 "Planned



Roads Within the Criteria Area.” Provided below is a discussion of the Project’s conformance to these sections of the MSHCP. (VCS, 2018, p. 31)

Project Compliance with MSHCP Section 6.1.2

As described in EIR Subsection 4.3.1, VCS determined that the Project Study Area contains 2.26 acres of MSHCP riverine areas. The Project would avoid all of the on-site riverine resources and none of the riverine species identified in Section 6.1.2 of the MSHCP were observed within the MSHCP Project Area. Therefore, preparation of a Determination of Biological Equivalence or Superior Preservation (DBESP) pursuant to Section 6.1.2 of the MSHCP would not be required. Additionally, riverine areas do not contain riparian/riverine habitat with the potential to support riparian species, including the least Bell’s vireo, southwestern willow flycatcher, western yellow-billed cuckoo, riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, vernal pool fairy shrimp, and smooth tarplant. There is low potential or no potential for suitable habitat to occur for these species within the Project Study Area, including the MSHCP Project Area. Thus, the Project would comply with MSHCP Section 6.1.2. (VCS, 2018, pp. 33-36)

Project Compliance with MSHCP Section 6.1.3

The MSHCP Project Area and the MSHCP-Covered Road Area are not located within the Narrow Endemic Plant Survey Area; therefore, narrow endemic plant surveys were not required for these portions of the Study Area. The Project would not conflict with MSHCP Section 6.1.3. (VCS, 2018, p. 32)

Project Compliance with MSHCP Section 6.1.4

The Western Riverside County MSHCP Urban/Wildland Interface Guidelines (Section 6.1.4) are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. The MSHCP Project Area is located approximately 1300 feet away from proposed Linkage 2 (Alberhill Creek), and while the sites are separated by the I-15, Stovepipe Creek on the Project site drains into Alberhill Creek (downstream). Thus, the Project could result in indirect effects to areas targeted for conservation. The Project would comply with the guidelines to minimize indirect impacts to Proposed Linkage 2 as outlined below (VCS, 2018, p. 36):

- **Drainage:** Development within the MSHCP Project Area and the MSHCP-Covered Road Area would be subject to the standard best management practices (BMPs) outlined in Volume I, Appendix C of the MSHCP to address any potential drainage effects. There is a potential that drainage associated with the MSHCP-Excluded Project Area could result in indirect impacts to downstream areas, as these areas are not subject to the MSHCP-identified BMPs. However, all development areas on and off site would be subject to the City’s NPDES permit, which would require preparation of a post-construction management program, such as a WQMP, to identify BMPs to ensure ongoing protection of drainages by requiring structural and programmatic controls. A Project-specific Stormwater Quality Management Plan (WQMP) (including as *Technical Appendix I2* to this EIR). The proposed BMPs include an extended detention basin, two sand filter basins and implementation of standard LID practices. Mandatory compliance with the provisions of the NPDES permit would ensure that indirect drainage impacts to MSHCP Conservation Areas would be reduced to less-than-significant levels. (VCS, 2018, p. 36)



- Toxics: Pre-construction BMPs listed in Appendix C of the MSHCP would be required for development within the MSHCP Project Area and MSHCP-Covered Road Area, where appropriate, to ensure that no discharge of toxics during construction would occur on-site. Furthermore, development of the entire Project site would be subject to a Stormwater Pollution Prevention Plan (SWPPP) that would include BMPs to implement during the construction process. A Project-specific Stormwater Quality Management Plan (WQMP) (including as *Technical Appendix I2* to this EIR) has been prepared to establish the post-construction BMPs that would be implemented with the development to mitigate impacts to post-construction runoff due to the Project. The proposed BMPs include an extended detention basin, two sand filter basins and implementation of standard LID practices. A final WQMP would be prepared and approved prior to construction. Therefore, discharge of products that are potentially toxic to or might adversely affect wildlife species would not occur. (VCS, 2018, pp. 36-37)
- Lighting: The Project site is not located adjacent to any MSHCP Conservation Areas; therefore, no lighting effects to Conservation Areas would occur. Additionally, lighting would be directed away from the preserved on-site drainage and associated habitat in accordance with the City's lighting regulations (refer to EIR Subsection 4.1) and the lighting requirements of the Nichols Ranch Specific Plan (NRSP). (VCS, 2018, p. 37)
- Noise: The Project site is not located adjacent to MSHCP Conservation Areas; therefore, no indirect noise effects to Conservation Areas would occur. Additionally, noise generated from the planned residential uses located adjacent to the preserved on-site drainage would not be anticipated to exceed the noise levels of the active mining uses that historically occurred on the northern portions of the site. Thus, significant indirect impacts to wildlife within the preserved onsite drainage/habitat would be less than significant. (VCS, 2018, p. 37)
- Invasive Species: Although the Project site is not adjacent to an MSHCP Conservation Area, the on-site drainage does drain downstream into Alberhill Creek where MSHCP conservation is targeted. Landscaping within 100 feet of the on-site preserved drainage and associated habitat is required by the Nichols Ranch Specific Plan (NRSP) to avoid the use of species included within Table 6-2 of the MSHCP, as identified in NRSP Table IV-2, *Prohibited Plant List*. Impacts would be less than significant. (VCS, 2018, p. 37)
- Barriers: As noted above, the Project site and off-site improvement areas are not located within 1,000 feet of an MSHCP Conservation Area; therefore, barriers would not need to be incorporated into the Project's design. (VCS, 2018, p. 37)
- Grading/Land Development: As noted above, the MSHCP Project Area and MSHCP-Covered Road Area are not located within 1,000 feet of an MSHCP Conservation Area; therefore, graded/manufactured slopes associated with the proposed Project would not extend into the MSHCP Conservation Area. (VCS, 2018, p. 37)

As noted above, the Project is not located adjacent to a MSHCP Conservation Area therefore, the Project is not subject to the Urban/Wildland Interface Guidelines. Furthermore, as demonstrated above, the Project would comply with MSHCP guidelines, regulatory requirements, and the provisions of the NRSP to reduce



indirect impacts to Proposed Linkage 2 and impacts would be less than significant. The Project would not conflict with Section 6.1.4 of the MSHCP and impacts would be less than significant. (VCS, 2018, pp. 34-37)

Project Compliance with MSHCP Section 6.3.2

A portion of the MSHCP Project Area and the majority of the MSHCP-Covered Road Area are located within the BUOW Survey Area, as shown previously on Figure 4.3-5. The MSHCP Project Area does have suitable habitat for BUOW; however, no BUOWs or sign of BUOWs were observed within the MSHCP Project Area, MSHCP-Covered Road Area, or the 500-foot surrounding buffer (which includes a majority of the MSHCP-Excluded Project Area) during focused surveys conducted by VCS in May through July, 2018. However, due to the fact that the Project site contains suitable habitat for burrows, the proposed development of the site would result in a potentially significant impact to the BUOW and suitable habitat for the species if the site were to be occupied before Project construction activities. Mitigation of the Project's impacts to BUOW and suitable habitat for BUOW would be required in order to ensure consistency with MSHCP Section 6.3.2. (VCS, 2018, pp. 32-33)

Project Compliance with MSCHP Section 7.3.5

The MSHCP-Covered Road Area for the Project includes the widening and realignment of Nichols Road. Nichols Road occurs within MSHCP Criteria Cells and is considered a covered (planned) road by the MSHCP. Nichols Road is identified by the City of Lake Elsinore General Plan and the Riverside County General Plan as an Urban Arterial roadway. Nichols Road is not identified in MSHCP Section 7.3.5 as a road with special environmental issues due to its location, which would otherwise require specific considerations for design and alignment (refer to Table 7-4 of the MSHCP). (VCS, 2018, pp. 37-38)

The realignment and widening of Nichols Road would occur within the Nichols Road right-of-way and along the currently existing, paved Nichols Road, within predominantly developed and disturbed habitats. While there is one sensitive plant species located within the MSHCP-Covered Road Area (Robinson's peppergrass), impacts to this species is not considered significant due to the plant's relatively low CRPR Ranking. Additionally, there is generally low potential for any other special status wildlife and/or plants (including Covered species) to occur in the MSHCP-Covered Road Area. The MSHCP-Covered Road Area does not occur within the Narrow Endemic Plant Survey Area and there is low potential for those plant species to occur within the MSHCP-Covered Road Area. Conservation land would not be located adjacent to the roadway and wildlife movement is not expected to be impacted by the road realignment and widening. Vegetation clearing would be avoided during the breeding and roosting seasons as required by Mitigation Measures listed below in Subsection 4.3.7 and if avoidance is not possible then pre-construction surveys for nesting birds, roosting bats, and/or BUOWs would be required to ensure no impacts to those resources. Construction of the road widening and alignment would follow the standard MSHCP BMPs described in Appendix C of the MSHCP (included in Appendix H of *Technical Appendix C*). Thus, the Project would comply with MSHCP Section 7.3.5 and impacts would be less than significant. (VCS, 2018, pp. 37-38)



C. Conclusion

Impacts due to a conflict with the SKR HCP would be less than significant with mandatory compliance with City Regulations and Design Requirements incorporated, which require the payment of applicable fees (refer to Subsection 4.3.7 of the EIR).

As indicated above, the southern 27.1 acres of the Project site would be fully consistent with the MSHCP and proposed Project activities within the MSHCP areas (MSHCP Project Area and MSHCP-Covered Road Area) would be considered consistent with the MCHSP. Impacts due to a conflict with the MSHCP would be less than significant on the southern 27.1 acres of the Project site with mandatory compliance with City Regulations and Design Requirements incorporated, requiring payment of applicable fees (refer to Subsection 4.3.7 of the EIR).

Proposed development within the northern 45.4 acres of the Project site would conflict with the MSHCP conservation criteria for Cells 4070 and 4067, which includes a target conservation of 80%-90% of the Cell Group focusing in the northwestern portion of the Cell Group. Notwithstanding the fact that the mitigation identified in EIR Subsection 4.3.7 would reduce the Project's impacts to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP would require the conservation of the northern 45.4 acres of the Project site, which inherently conflicts with the Project's primary objective to provide residential and commercial uses on-site. Moreover, historic mining operations at the site have fully disturbed the northern 45.4 acres that are intended for conservation under the MSHCP. Thus, even if the northern 45.4 acres of the Project site were to be conserved, the site still would not meet the objectives for Cell Group W and any preserved habitat would be disconnected from the portions of Cell Group W located west of the Project site. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the 45.4 acres of the Project site represent a significant impact of the proposed Project. However, because the vast majority of properties within the MSHCP area are subject to Chapter 16.85 of the Municipal Code (or other the implementing ordinance of other local jurisdictions) and would be required to comply with the provisions of the MSHCP and all MSHCP-related requirements, the Project's non-compliance with the MSHCP would be less-than-cumulatively considerable.

4.3.5 CUMULATIVE IMPACT ANALYSIS

Although only a portion of the Project site is subject to the MSHCP, the cumulative impact analysis considers development of the Project in conjunction with other development projects located within the purview of the Western Riverside County MSHCP. This Study Area for cumulatively-considerable impacts to biological resources is appropriate because the MSHCP encompasses a large area surrounding the Project site, and provides for the long-term protection of sensitive plant, animal, and plant communities throughout the MSHCP area. Additionally, most cumulative development projects within the Project vicinity would be subject to the provisions of the MSHCP, and the general range of habitats, species, climate, etc. are fairly consistent throughout the MSHCP.



As discussed under Threshold a, the Project contains Robinson's pepper grass within the MSHCP-Covered Road Area; however, impacts were evaluated as less than significant because of this species' low CRPR ranking. Thus, Project impacts to special status plants would be less-than-cumulatively considerable.

The Project site also contains coastal whiptail and coast horned lizard in the MSHCP-Excluded Survey Area; however, a majority of the habitat suitable for both species would be preserved on-site and both species are covered by the MSHCP. As such, potential impacts to the species would be limited. Furthermore, both species were observed in the MSHCP-Excluded Survey Area, which is the portion of the Project site is not subject to the MSHCP; however, this area does fall within the MSHCP boundaries. The coastal whiptail and coast horned lizard are both covered species under the MSHCP; therefore, conservation of this species would be addressed on a regional level around the Project site and potential impacts due to Project implementation would be less-than-cumulatively considerable.

In addition, although the CAGN was not observed on the Project site during 2017 focused surveys within the MSHCP-Excluded Project Area, CAGN was incidentally observed within the Project site during focused burrowing owl surveys in 2018. Because the 2017 surveys determined the MSHCP-Excluded Survey Area to be unoccupied and the incidental observations in 2018 in and adjacent to an area undergoing active mine reclamation support the condition of CAGN potentially dispersing through the MSHCP-Excluded Project Area to the MSHCP Project Area, no "take" is anticipated to occur. Therefore, no impacts to this species are expected within the MSHCP-Excluded Project Area. Additionally, Project compliance with the MSHCP within the MSHCP Project Area would address long-term conservation of the species on a regional scale. Impacts to the CAGN would be less-than-cumulatively considerable.

The Project would also have the potential to impact several special status animal species with potential to occur on-site; however, the animal species would be covered under the MSCHP and addressed through payment of fees. The Project would have the potential to directly or indirectly impact the California glossy snake and coast patch-nosed snake which have moderate potential to occur on-site. Both species have moderate potential to occur on the Project site but are not covered by the MSHCP. Impacts would be minimized through preservation of the majority of the suitable on-site habitat (i.e. Stovepipe Creek and associated habitat). However, the Project would impact suitable habitat for these species within the MSHCP-Excluded Project Area. This is evaluated as a cumulatively-considerable impact of the proposed Project.

The Project has the potential to impact the burrowing owl (BUOW) if the site were to become occupied prior to commencement of construction activities. Other developments in the region also have the potential to impact the BUOW. Thus, the Project's potential construction-related impacts to the BUOW would be cumulatively considerable.

Potential impacts to other special status animals also would be less-than-cumulatively considerable due to the limited potential habitat to be impacted by the Project and their covered status under the MSHCP. Additionally, the Project site does not contain suitable nesting habitat for special-status birds; accordingly, impacts to special-status birds would be less-than-cumulatively considerable. The Project does, however, have the potential to result in impacts to nesting birds, roosting bats, and/or raptors during the breeding or maternity



roosting season; this is evaluated as a cumulatively-considerable impact for which mitigation would be required.

As discussed under Threshold b, the Project would impact 2.58 acres of native vegetation types, including 0.38 acre of Riversidean sage scrub, 0.40 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 1.73 acres of disturbed Riversidean sage scrub-encelia dominant. Impacts to native vegetation types within the MSHCP Project Area would be less than significant due to compliance with the MSHCP in this portion of the Project site. However, for the MSHCP-Excluded Project Area, Project impacts to 0.23 acre of Riversidean sage scrub, 0.14 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 0.14 acres of disturbed Riversidean sage scrub-encelia dominant would not be addressed by the MSHCP because the MSHCP does not apply to this portion of the Project site. However, because the vast majority of cumulative developments would be subject to the MSHCP, Project impacts to jurisdictional drainages would be less-than-cumulatively considerable.

Construction and operational activities within the Project Study Area could result in indirect impacts to the vegetation communities surrounding the directly impacted areas. With development, “edges” of vegetation communities may be exposed and more susceptible to invasion by invasive species (introduced by planted landscaping, seed dispersal from cars, people, and/or pets, and/or wind). Construction-related erosion, runoff, sedimentation, soil compaction, and alteration of drainage patterns that may affect plants by altering Project site conditions so that the location in which they are growing becomes unfavorable are prohibited by federal and state laws. Compliance with the requirements under applicable state and federal laws would reduce indirect impacts to sensitive vegetation communities. Nonetheless, because other developments within the region could also result in indirect impacts to drainages, the Project’s potential to result in indirect impacts represents a cumulatively-considerable impact for which mitigation would be required.

As discussed under Threshold c, the results of the jurisdictional delineation concluded that the Project would impact 0.44 acre of CDFW and RWQCB jurisdiction including 0.07 acre of Riversidean alluvial fan sage scrub. The Project would not impact any of the area subject to USFWS and RWQCB jurisdiction located on-site. The Project site also contains MSCHP riparian/riverine features; however, the Project would not impact any of these features located within the MSHCP Project Area. Thus, no impact would occur to USFWS/RWQCB jurisdictional features located on the entire Project Study Area nor MSCHP riparian/riverine features located within the MSCHP Project Area. Because other developments within the region also are likely to impact drainages subject to CDFW or RWQCB jurisdiction, Project impacts to 0.44 acre of CDFW/RWQCB jurisdictional features would be cumulatively-considerable.

As discussed under Threshold d, the Project site lacks migratory wildlife corridors and wildlife nursery sites and does not occur within MSHCP Cores or Linkages. However, the Project site could serve a function in local wildlife movement such as dispersal and foraging. The Project would preserve and avoid the on-site portion of Stovepipe Creek and preserve the majority of the sage scrub habitats located on-site which serve as local wildlife corridors. Thus, due to relatively small size of area in which vegetation removal would occur as part of the proposed Project and the built nature of the area surrounding the Project site, long-term effects to wildlife movement would be less than significant. Furthermore, a large area of open space exists north of the Project site that would continue to serve as a corridor for resident and migratory wildlife species in the Project



vicinity; thus, effects to wildlife movement or established resident or migratory wildlife corridors due to Project implementation would be less-than-cumulatively considerable

As discussed under Threshold e, the northern 45.4 acres of the Project would not comply with City of Lake Elsinore Municipal Code Chapter 16.85 which requires payment of MSHCP fees. The northern 45.4 acres of the Project are not subject to compliance with the MSHCP (and thus not subject to compliance with Municipal Code Chapter 16.85) because the MSHCP would not provide coverage for impacts within the MSHCP-Excluded Project Area; thus, impacts would be less than significant. Because the vast majority of properties within the MSHCP area are subject to the provisions of the MSHCP and would be required to comply with all MSHCP-related requirements including payment of MSHCP fees, the Project's partial exemption from Municipal Code Chapter 16.85 would be less-than-cumulatively considerable.

As discussed above under Threshold f, the Project site is located within the Western Riverside County MSHCP and SKR HCP. The Project and cumulative developments would be subject to compliance with the SKR HCP, including the payment of fees, pursuant to locally-implementing ordinances; as such, a conflict with the SKR HCP would not occur and impacts would be less-than-cumulatively considerable. However, as previously noted, the MSHCP only applies to the southern 27.1 acres of the Project site. Impacts due to a conflict with the MSHCP would be less than significant for the southern 27.1. However, because the Project would not comply with the MSHCP conservation requirements for the northern 45.4 acres of the site, the Project would result in a direct impact due to a conflict with the MSHCP. Although the Project would result in a significant direct impact due to a non-compliance with the MSHCP for the northern 45.4 acres of the Project site, the vast majority of properties within the 1.26 million-acre MSHCP area are subject to the provisions of the MSHCP and would be required to comply with all MSHCP-related requirements. The Project's 45.4 acres that would not comply with the MSHCP represents 0.00004% of the overall 1.26 million-acre MSHCP area. Thus, the Project's non-compliance with the MSHCP would be less-than-cumulatively considerable. As such, the Project would not result in a cumulatively-considerable impact due to a conflict with applicable habitat conservation plans or natural community conservation plans. Impacts would be less than cumulatively-considerable.

4.3.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Significant Direct and Cumulatively-Considerable Impact. The Project would result in significant direct and cumulatively-considerable impacts to biological resources. Specifically, the Project would result in impacts to burrowing owl habitat during the breeding season, which requires mitigation to ensure impacts do not occur to nesting burrowing owls. Additionally, the Project also has the potential to impact active native bird nests protected by the MBTA and active bat roosts if vegetation is removed during the nesting season (February 1 to August 31 for birds and April 1 to August 31 for bats.) Furthermore, the Project would result in direct impacts to habitat for the California glossy snake and coast patch-nosed snake within the MSHCP-Excluded Project Area, which represents a direct impact of the proposed Project. In addition, the Project has the potential to impact nesting BUOWs if they occupy the site prior to the commencement of construction activities.

Threshold b: Significant Direct Impact. The Project would permanently impact 2.58 acres of native vegetation types, including 0.38 acre of Riversidean sage scrub, 0.40 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 1.73 acres of disturbed Riversidean sage scrub-encelia dominant.



Impacts to native vegetation types within the MSHCP Project Area would be less than significant due to compliance with the MSHCP in this portion of the Project site. However, for the MSHCP-Excluded Project Area, Project impacts to 0.23 acre of Riversidean sage scrub, 0.14 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 0.14 acres of disturbed Riversidean sage scrub-encelia dominant, would represent a significant impact for which mitigation would be required.

Threshold c: Significant Direct and Cumulatively-Considerable Impact. Project implementation would result in direct impacts to 0.44 acre of CDFW and RWQCB jurisdiction including 0.07 acre of Riversidean alluvial fan sage scrub. Accordingly, the Project would have a substantial adverse effect on federally-protected waters as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means, and impacts are evaluated as significant on both a direct and cumulatively-considerable basis.

Threshold d: Less-than-Significant Impact. The Project site lacks migratory wildlife corridors and wildlife nursery sites and does not occur within MSHCP Cores or Linkages. However, the Project Study Area occurs within an area that may serve a function in local wildlife movement such as dispersal and foraging. The Project would preserve and avoid the on-site portion of Stovepipe Creek and preserve the majority of the sage scrub habitats located on-site which serve as local wildlife corridors. Therefore, the Project would have a less-than-significant impact on native resident or migratory wildlife corridors or wildlife nursery sites.

Threshold e: Less-than-Significant Impact. The Project Applicant would be required to pay SKR fees pursuant to Lake Elsinore Municipal Code Chapter 19.04. For the southern 27.1 acres of the Project site, the Project Applicant would be required to pay MSHCP fees pursuant to Lake Elsinore Municipal Code Chapter 16.85. The Project Applicant would be exempt from the fee requirements of Lake Elsinore Municipal Code Chapter 16.85 for the northern 45.4 acres of the site because the Project's impacts in the northern portions of the site would not be covered under the MSHCP. In addition, the Project would not conflict with the City's palm tree preservation program (Chapter 5.116 of the Lake Elsinore Municipal Code).

Threshold f: Significant Direct and Cumulatively Considerable Impact. The Western Riverside County MSHCP and SKR HCP are the only habitat conservation plans or natural community conservation plans applicable to the Project site. The analysis concluded that impacts due to a conflict with the SKR HCP would be less than significant, and impacts due to a conflict with the MSHCP on the southern 27.1 acres of the Project site would be less than significant with mandatory compliance with Municipal Code Chapter 16.85 and applicable MSHCP requirements. The northern 45.4 acres are exempt from the Western Riverside County MSHCP; nonetheless, because the Project would not implement the MSHCP conservation goals for MSHCP Cell Group W, the Project's non-compliance with the MSHCP on the northern 45.4 acres of the site represents a significant direct impact. The southern 27.1 acres of the Project site located within the MSHCP contains suitable habitat for burrowing owls. Impacts to nesting owls would represent a significant impact due to a conflict with MSHCP policies related to the burrowing owl, and mitigation is required. Impacts due to a conflict with the MSHCP's adjacency guidelines would be less than significant.



4.3.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project Applicant shall make payment of Western Riverside County MSHCP fees pursuant to City of Lake Elsinore Municipal Code Chapter 16.85 for the southern 27.1 acres. Fees shall be paid in compliance with Municipal Code Chapter 16.85.
- The Project Applicant shall make payment of SKR HCP fees pursuant to City of Lake Elsinore Municipal Code Chapter 19.04. Fees shall be paid in compliance with Municipal Code Chapter 19.04.
- To ensure compliance with the Western Riverside County MSHCP, the following shall be required:
 - As part of its review of implementing discretionary applications (e.g., building permits), the City of Lake Elsinore shall assure that landscaping plans do not include the use of invasive plant species listed in Volume I, Table 6-2 of the MSHCP or in Table IV-2, *Prohibited Plant List*, of the Nichols Ranch Specific Plan.
 - Prior to approval of grading permits, the Project's construction contractor shall develop and implement a Storm Water Pollution Prevention Program (SWPPP) to address runoff and potential water quality degradation during construction.
 - All construction plans (i.e., grading permits, building permits, etc.) shall include the following note, compliance with which shall be assured by the construction contractor:

"During any nighttime construction activities, all lighting shall direct lighting away from the preserved on-site drainage and associated habitat."

Mitigation

MM 4.3-1 Prior to the issuance of grading permits, the City of Lake Elsinore shall ensure that the following note is included on the Project's grading plans. Project contractors shall be required to ensure compliance with this note and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.

"Vegetation clearing shall be conducted outside of the bird nesting season (February 1 to August 31) to the extent feasible. If avoidance of the nesting season is not feasible, a nesting bird survey shall be conducted by a qualified biologist within no more than 72 hours of such scheduled disturbance, to determine the presence of nests or nesting birds. If active nests are identified, the biologist shall establish appropriate buffers around the vegetation (typically 500 feet for raptors and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers shall be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest).



The biologist shall review and verify compliance with these nesting boundaries and shall verify the nesting effort has finished. Work may resume within the buffer area when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the City of Lake Elsinore for mitigation monitoring compliance record keeping. If vegetation removal is not completed within 72 hours of a negative survey during nesting season, the nesting survey must be repeated to confirm the absence of nesting birds.”

- MM 4.3-2 In accordance with MSHCP Objective 6, prior to issuance of grading permits or other permits authorizing ground disturbance, the Project Applicant shall retain a qualified biologist to perform a pre-construction burrowing owl survey. The pre-construction burrowing owl survey shall occur within the Burrowing Owl Survey Area where suitable habitat is present within 30 days prior to Project commencement of any ground-disturbing activities at the Project site. If active burrowing owl burrows are detected during the breeding season, all work within an appropriate buffer (typically a minimum 300 feet) of any active burrow shall be halted until that nesting effort is finished. The on-site biologist shall review and verify compliance with these boundaries and shall verify the nesting effort has finished. Work can resume in the buffer when no other active burrowing owl burrows nests are found within the buffer area. If active burrowing owl burrows are detected outside the breeding season or during the breeding season and its determined nesting activities have not begun, then passive and/or active relocation may be approved following consultation with CDFW. The installation of one-way doors may be installed as part of a passive relocation program. Burrowing owl burrows shall be excavated with hand tools by a qualified biologist when determined to be unoccupied, and back filled to ensure that animals do not re-enter the holes/dens. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to CDFW. A copy of the results of the pre-construction survey (and all additional surveys), as well as copies of the Burrowing Owl Management Plan, if required, shall be provided to the City of Lake Elsinore Planning Division for review and approval (in the case of the Burrowing Owl Management Plan) prior to any vegetation clearing and ground disturbance activities.
- MM 4.3-3 Prior to issuance of grading permits or other permits authorizing ground disturbance that would commence during the breeding season of bat species potentially utilizing the site (April 1 through August 31), the Project Applicant shall retain a qualified biologist to conduct a pre-construction survey to determine if active bat roosts are present on the Project site. The survey shall be conducted no earlier than 72 hours prior to commencement of vegetation removal that would occur during the bat breeding season. If work begins outside of breeding season, no roosting bats are found, or if bats have not established an active maternity roost, no further mitigation is required. If an established maternity roost is found, either (1) postpone or halt construction within 200 feet of the roost until the roost is vacated and juveniles have fledged, or (2) require that a qualified biologist develop alternative measures, such as biological



monitoring during active construction within the 200-foot buffer to ensure established maternity roosts are not impacted. In the event ground-disturbing activities do not commence within 72 hours of the most recent survey, an additional survey shall be conducted within 72 hours of ground-disturbing activities. A copy of the results of the pre-construction survey(s) (and all additional surveys), shall be provided to the City of Lake Elsinore Planning Division for review prior to any vegetation clearing and ground disturbance activities.

- MM 4.3-4 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Lake Elsinore Planning Division that impacts to 0.23 acre of Riversidean Sage Scrub and 0.07 acre of Riversidean Alluvial Fan Sage Scrub have been compensated for at a minimum 2:1 ratio (impact:mitigation) through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location. It should be noted that the 0.14-acre compensatory mitigation required by this mitigation measure for impacts to Riversidean Alluvial Fan Sage Scrub is included in, and is not in addition to, the mitigation requirements specified by Mitigation Measure MM 4.3-6.
- MM 4.3-5 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Lake Elsinore Planning Division that impacts to 0.28 acres of disturbed Riversidean sage scrub (including Disturbed Riversidean Sage Scrub – Encelia dominant) have been compensated for at a minimum 1:1 ratio (impact:mitigation) through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location.
- MM 4.3-6 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City of Lake Elsinore Planning Division that impacts to 0.42 acre of streambed waters of the State have been compensated for at a minimum 2:1 ratio through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location. It should be noted that the 0.14-acre of Riversidean Alluvial Fan Sage Scrub mitigation required by Mitigation Measure MM 4.3-4 is included within (and not in addition to) the 0.84-acre of compensatory mitigation for streambed waters required by this mitigation measure.
- MM 4.3-7 Prior to the issuance of a grading permit, the proposed Project shall obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional waters subject to Regional Water Quality Control Board and the California Department of Fish and Wildlife. Authorizations anticipated for this Project include, but are not necessarily limited to, Waste Discharge Requirements from the RWQCB and a Section 1600 Streambed Alteration Agreement from the CDFW.

4.3.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a: Less-than-Significant Impact with Mitigation Incorporated. Implementation of City Regulations and Design Requirements would ensure payment of fees pursuant to Chapter 16.85 of the Lake Elsinore Municipal Code for the southern 27.1 acres of the Project site, which would mitigate the Project's impacts to



habitats within this portion of the Project site. Mitigation Measure MM 4.3-1 would preclude potential impacts to nesting birds protected by the MBTA. Implementation of Mitigation Measure MM 4.3-2 would ensure that pre-construction surveys are conducted to determine the presence of burrowing owl within the on- or off-site improvement areas, and to implement appropriate avoidance/relocation measures to preclude significant impacts to this species; with implementation of the required mitigation, Project impacts with respect to burrowing owl would be reduced to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-3 would preclude potential impacts to breeding bats. Implementation of Mitigation Measures MM 4.3-4 and MM 4.3-5 would provide compensatory mitigation for impacts to potential habitat for the California glossy snake and coast patch-nosed snake within the MSHCP-Excluded Project Area, and would reduce Project impacts to less-than-significant levels. With implementation of the required mitigation, Project impacts to species identified as a candidate, sensitive, or special status species are mitigated to less-than-significant levels.

Threshold b: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measure MM 4.3-4 would ensure that impacts to 0.23 acre of Riversidean Sage Scrub and 0.07 acre of Riversidean Alluvial Fan Sage Scrub have been compensated for at a minimum 2:1 ratio through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location, and would reduce Project impacts to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-5 requires mitigation for impacts to 0.28 acres of disturbed Riversidean sage scrub (including Disturbed Riversidean Sage Scrub – Encelia dominant) to be mitigated at a 1:1 ratio through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location, and would reduce Project impacts to less-than-significant levels. Implementation of Mitigation Measure MM 4.3-6 would ensure that impacts to 0.42 acre of streambed waters of the State are compensated for at a minimum 2:1 ratio through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location, and would reduce Project impacts to less-than-significant levels. Mitigation Measure MM 4.3-7 also would ensure that the Project Applicant obtains the required state permits, as appropriate. With implementation of the required mitigation, impacts to riparian habitat and other sensitive natural communities would be reduced to less-than-significant levels.

Threshold c: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measures MM 4.3-4 and MM 4.3-6 require mitigation of 0.44 acre of Streambed Waters of the State at a 2:1 ratio (including 0.14 acre of Riversidean Alluvial Fan Sage Scrub) through off-site mitigation at an agency-approved mitigation bank, with an in-lieu fee program, on-site mitigation, or at an off-site permittee sponsored location. Implementation of the required mitigation would reduce to less-than-significant levels the Project's impacts to federally-protected wetlands as defined by Section 404 of the Clean Water Act.

Threshold f: Significant and Unavoidable Direct Impact. As previously indicated, in 2004 the owners of the northern 45.4 acres of the Project site, along with other landowners, entered into a Settlement Agreement and Memorandum of Understanding ("Agreement") with the County of Riverside which, among other things, explicitly exempted the northern 45.4 acres of the Project site from all provisions of the MSHCP. Notwithstanding, the northern 45.4 acres of the site are located within MSHCP Cell Group W and encompass portions of Criteria Cell 4070 and a small portion of Criteria Cell 4067. Pursuant to the MSHCP, conservation within Cell Group W is intended to encompass 80%-90% of the Cell Group focusing in the northwestern



portion of the Cell Group. The 45.4-acre MSHCP-Excluded Project Area occurs in the eastern portion of Group W. Although the mitigation identified in EIR Subsection 4.3.7 would reduce the Project's impacts to biological resources to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP Conservation Criteria would require the conservation of most or all of the 45.4-acre MSHCP-Excluded Project Area, which inherently conflicts with the Project's primary objective to develop the site with residential, commercial, and recreational land uses. Moreover, mining and reclamation activities within the MSHCP-Excluded Project Area have fully disturbed most of the areas proposed for disturbance by the Project and that are intended for conservation under the MSHCP. Thus, even if the MSHCP-Excluded Project Area were to be conserved, the site still would not meet the objectives for Cell Group W and any preserved habitat would be disconnected from the portions of Cell Group W located west or north of the Project site due to the presence of I-15 and Nichols Road. The option of conserving the entire MSHCP-Excluded Project Area is considered as part of the No Project Alternative in EIR Subsection 6.3.1. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the site represents a significant impact of the proposed Project that cannot be mitigated to below a level of significance.



4.4 ENERGY

4.4.1 EXISTING CONDITIONS

Under existing conditions, the Project site is largely vacant, although the northern 45.4 acres of the Project site are undergoing on-going mining reclamation activities. Thus, energy demands for the Project site under existing conditions consist of fuel consumption for reclamation equipment. It should be noted that all reclamation activities would cease prior to implementation of the proposed Project; thus, for purposes of analysis, it is assumed that the Project site does not produce a demand for energy under existing conditions.

4.4.2 APPLICABLE ENVIRONMENTAL REGULATIONS

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation (DOT), the United States Department of Energy (DOE), and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the Public Utilities Commission (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. Project consistency with applicable federal and state regulations is presented below each regulation.

A. Federal Regulations

1. *Intermodal Surface Transportation Efficiency*

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. The applicable MPO for the City of Lake Elsinore is the SCAG. SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is the applicable planning document for the area.

B. California Regulations

1. *Integrated Energy Policy Report*

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing California'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 CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the Integrated Energy Policy Report (IEPR).

The 2017 IEPR focuses on next steps for transforming transportation energy use in California. The 2017 IEPR addresses the role of transportation in meeting state climate, air quality, and energy goals; the transportation



fuel supply; the Alternative and Renewable Fuel and Vehicle Technology Program; current and potential funding mechanisms to advance transportation policy; transportation energy demand forecasts; the status of statewide plug-in electric vehicle infrastructure; challenges and opportunities for electric vehicle infrastructure deployment; measuring success and defining metrics within the Alternative and Renewable Fuel and Vehicle Technology Program; market transformation benefits resulting from Alternative and Renewable Fuel and Vehicle Technology Program investments; the state of hydrogen, zero-emission vehicle, biofuels, and natural gas technologies over the next ten years; transportation linkages with natural gas infrastructure; evaluation of methane emissions from the natural gas system and implications for the transportation system; changing trends in California's sources of crude oil; the increasing use of crude-by-rail in California; the integration of environmental information in renewable energy planning processes; an update on electricity reliability planning for Southern California energy infrastructure; and an update to the electricity demand forecast.

2. *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.

3. *California Code Title 24, Part 6, Energy Efficiency Standards*

California Code Title 24, Part 6 (also referred to as the California Energy Code) was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption. To these ends, the California Energy Code provides energy efficiency standards for residential and nonresidential buildings. California's building efficiency standards are updated on an approximately three-year cycle. The 2016 Standards for building construction, which went into effect on January 1, 2017, improved upon the former 2013 Standards for residential and nonresidential buildings.

4. *Pavley Fuel Efficiency Standards (AB 1493)*

In California, AB 1493 establishes fuel efficiency ratings for model year 2009-2016 passenger cars and light trucks.

5. *California Renewable Portfolio Standards (SB 1078)*

SB 1078 requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020.

4.4.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to biological resources if the Project or any Project-related component would:



- a. *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or*
- b. *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.*

The above listed thresholds are derived directly from Section VI of Appendix G to the CEQA Guidelines and address typical adverse effects to biological resources (OPR, 2018).

4.4.4 **IMPACT ANALYSIS**

Threshold a: *Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Threshold b: *Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

In compliance with CEQA Guidelines Appendix F, below is an analysis of the proposed Project's anticipated energy use to determine if the Project would result in the wasteful, inefficient or unnecessary consumption of energy, or 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.

In addition, CEQA Guidelines Appendix F states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

A. Energy and Fuel Use for Project Construction

The Project's construction process would consume electrical energy and fuel. Project-related construction would represent a "single-event" electric energy and fuel demand and would not require on-going or permanent commitment of energy or diesel fuel resources for this purpose. Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project-related construction. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hours per gallon (hp-hr-gal), obtained from the cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (CARB, 2011, p. D-28). Construction workers also would consume fuel traveling to and from the site. An aggregated fuel economy of light duty automobiles (vehicle class within the California sub-area for a 2019 calendar year) are calculated to have a fuel efficiency of 28.17 miles per gallon (MPG).

Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of bulk purchases, transport, and use of construction materials. The 2017 IEPR published by the CEC shows that fuel efficiencies are improving for on and off-road vehicle engines due to more stringent government requirements. The amount of energy and fuel use anticipated by the Project's construction activities would be typical for the type of construction proposed because there are no aspects of the Project's proposed construction process that



are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies. CCR Title 13, Title 13, Motor Vehicles, Section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

B. Energy Use for Project Operation

1. Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total vehicle miles traveled (VMT) and estimated vehicle fuel economies of vehicles accessing the Project site. Fuel would be provided by commercial vendors, which are required to comply with state and federal requirements regarding energy efficiency. Trip generation and VMT generated by up to 168 residential units, 14.5 acres of commercial retail uses, and 8.3 acres of recreational facilities on the Project site would be consistent with other residential, commercial, and recreational uses similar in scale and configuration as reflected in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Ed., 2017); and CalEEMod v2016.3.2. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption. On the contrary, the Project's proposed residential and commercial mixed-uses would reduce VMT because Project residents would have access to nearby commercial retail uses.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of cars and trucks to alternative energy sources (e.g., electricity, natural gas, bio fuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. Project-related development also would install trails, sidewalks, and bicycle lanes that would facilitate and encourage pedestrian and bicycle access and subsequently reduce VMT and associated energy consumption. As supported by the preceding discussions, the Project's transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

2. Facility Energy Demands

Project residential units and associated maintenance activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by Southern California Gas Company and electricity would be supplied to the Project by Southern California Edison (SCE). In Appendix 3.1 of the Project's greenhouse gas report (Technical Appendix F), Urban Crossroads, Inc. calculated the Project's mitigated operational energy demands to be 22,606,463 kBtu/year of natural gas and 6,536,276 kWh/year of electricity (Urban Crossroads, 2018b, Appendix 3.1).

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 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.).

3. *Energy Consumption Summary*

For new development such as that proposed by the Project, compliance with California Building Standards Code Title 24 energy efficiency requirements (CalGreen) are considered demonstrable evidence of efficient use of energy. Residential and commercial development on the Project site would be required to promote and provide for energy efficiencies beyond those required under other applicable federal or State of California standards and regulations, and in so doing would meet all California Building Standards Code 24 standards. Moreover, energy consumed by the Project is expected be comparable to, or less than, energy consumed by other residential and commercial uses of similar scale and intensity that are constructed and operating in California.

C. Consistency with Energy Conservation Plans and Regulations

Under existing conditions, there are no adopted state or local plans for renewable energy or energy efficiency in the Project area. Thus, the Project would have no potential to conflict with such plans, and no impact would occur. Additionally, and as discussed below, the Project would be consistent with or otherwise would not conflict with any of the environmental regulations listed above in subsection 4.4.2.

Project Consistency with Intermodal Surface Transportation Efficiency Act of 1991: Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because no intermodal facilities are planned on or through the Project site. Also, as discussed in EIR Section 4.10, *Land Use and Planning*, the Project would not conflict with the SCAG’s RTP/SCS.

Project Consistency with the California Integrated Energy Policy Report (Senate Bill 1389): The 2017 IEPR is a State Policy report. An individual development proposal such as the proposed Project has no ability to comply with or conflict with this report.

Project Consistency with State Energy Plan: The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The Project would facilitate access to and take advantage of existing infrastructure systems; provide pedestrian and bicycle infrastructure and the collocation of residential and commercial retail uses to promote walking as an alternative form of transportation to reduce vehicle miles traveled by automobile; and promote land use compatibility through the development of residential and commercial uses in close proximity to similarly planned uses. The Project therefore supports the urban design principles identified under the State of California Energy Plan and is thus consistent with or would not otherwise interfere with implementation of the State of California Energy Plan.

Project Consistency with California Code Title 24, Part 6 (California Energy Code): The Project is required by State law to be designed, constructed, and operated to meet or exceed Title 24 Energy Efficiency Standards.



On this basis, the Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards.

Project Consistency with Pavley Fuel Efficiency Standards (AB 1493): AB 1493 is applicable to the Project because model year 2009-2016 passenger cars and light duty truck vehicles traveling to and from the Project site are required by law to comply with the legislation's fuel efficiency requirements. On this basis, the Project would not interfere with or otherwise obstruct implementation of AB 1493.

Project Consistency with California Renewable Portfolio Standards (SB 1078): Energy directly or indirectly supplied to the Project by electric corporations is required by law to comply with SB 1078. Thus, the Project would be consistent with SB 1078.

D. Conclusion

Based on the preceding analysis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Furthermore, the Project would not cause or result in the need for additional energy facilities or energy delivery systems. Additionally, the Project would not conflict with any adopted state or local plans for renewable energy or energy efficiency. Impacts due to the Project's energy demands would therefore be less than significant.

4.4.5 CUMULATIVE IMPACT ANALYSIS

As indicated above, there are no adopted state or local plans for renewable energy or energy efficiency in effect in the Project area, and no cumulatively-considerable impact would occur as a result of such conflict. With respect to energy consumption, the analysis above demonstrates that the Project's construction and operational characteristics would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Other developments in the region would be subject to CEQA and would similarly be required to demonstrate that no wasteful, inefficient, or unnecessary consumption of energy resources would occur. Accordingly, the Project's impacts due to energy consumption would be less-than-cumulatively considerable.

4.4.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds a and b: Less-than-Significant Impact. There are no adopted state or local plans for renewable energy or energy efficiency in the Project area. Additionally, the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Impacts due to energy demand would be less than significant.

4.4.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Impacts due to the Project's energy demands would be less than significant and mitigation is not required.



4.5 GEOLOGY AND SOILS

This subsection assesses the existing surface and subsurface geologic conditions and features of the Project site and determines the potential for impacts associated with these features. The analysis in this subsection is based, in part, on information from the report titled “Geotechnical Investigation and Geologic Evaluation Report” (CHJ Consultants, 2018) by CHJ Consultants, Inc. (herein, CHJ Consultants), dated February 2, 2018. This report is included as *Technical Appendix D* to this EIR.

As noted in Section 2.0, *Environmental Setting*, the northern 45.4 acres of the Project site are currently undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). Reclamation activities include the grading of and disturbance to most of the northern 45.4 acres of the Project site. In May 2016, CHJ Consultants performed a geotechnical investigation on the northern 45.4 acres of the Project site as part of the planned reclamation activities. In April 2017 grading of the western portion of the 45.4 began on-site and was in progress during preparation of the current 2018 Geotechnical Investigation prepared for the proposed 72.5-acre Project site. CHJ Consultants, provided observation and compaction testing services during grading. (CHJ Consultants, 2018, p. 3)

4.5.1 EXISTING CONDITIONS

A. Regional Geology

The Project site is situated in an uplifted and dissected bedrock terrain in the Peninsular Ranges geomorphic province. The Peninsular Ranges include plutonic and metamorphic crystalline rocks of Cretaceous and older age. The crystalline basement rocks are locally mantled by colluvial soils and older sediments. Geologic units in the Project site area include Mesozoic age metasedimentary and metavolcanic rocks coeval with the plutonic rocks of the Peninsular Ranges batholith and younger alluvial fan sediments of Holocene and late-Pleistocene age. (CHJ Consultants, 2018, p. 5)

B. Site Geologic Units

CHJ Consultants reviewed aerial imagery dated from 1938 to 2017 for indications of past site usage and potential geologic hazards. The images examined between 1938 and 2005 show the Project site undeveloped except for dirt roads, which crossed the Project site. Stockpiles in the northern portion of the site were present in the 2009 aerial image. These stockpiles primarily consisted of revegetation plots prepared for the Nichols Road Mine located north of the site. No other pertinent features were observed on the aerial images. (CHJ Consultants, 2018, p. 5)

The surficial soils of the Project site are younger alluvial deposits that are underlain by crystalline bedrock units including Mesozoic-age metavolcanics. As previously noted, the northern portion of the Project site is undergoing reclamation in accordance with recommendations provided by CHJ Consultants in a previous report (CHJ Consultants, 2017). The field exploration conducted by CHJ Consultants indicated the southern portion of the Project site is primarily underlain by silty sand, sand, sandy silt, and bedrock recovered as sandy gravel underlain by bedrock. (CHJ Consultants, 2018, pp. 5-6)



C. Site Topography

Under existing conditions, the topography of the Project site is relatively flat with elevations ranging from approximately 1,294 feet above mean sea level (amsl) in the southwestern portion of the site to approximately 1,370 feet amsl in the eastern portion of the site; however, following reclamation elevations on-site would range from 1,294 to 1,323 feet amsl (Google Earth, 2016). Please refer to Figure 2-3 in Section 2.0, *Environmental Setting*, which depicts the Project site's topographic conditions.

D. Groundwater

The Project site is located in Section 25 of Township 5 South, Range 5 West, and is located near the Elsinore Groundwater Basin. The nearest known well is greater than 1.5 miles south of the Project site and is situated in valley sediments. The Project site is underlain at relatively shallow depth by crystalline bedrock. CHJ Consultants observed no seepage, springs, or other evidence for a groundwater table within the Project site boundary during geologic mapping. Previous investigations on the Project site in 2005 by Geotechnics, Incorporated reported groundwater as seepage in bedrock or perched on clay layers at depths ranging from 18 to 35 feet below ground surface. Groundwater was not encountered during CHJ Consultant's subsurface evaluation, which had a maximum depth of approximately 51.5 feet below existing ground surface. (CHJ Consultants, 2018, pp. 6-7)

The depth to groundwater on the Project site is likely to vary seasonally, and perched groundwater may occur at the soil-bedrock contact. The historic high groundwater level for the Project site has been estimated to be 40 feet below ground surface. The 40-foot historic high is consistent with the depth to groundwater of approximately 40 feet depicted by geological contours mapped for the Project area in 1915. (CHJ Consultants, 2018, p. 7)

E. Faulting

The geologic structure of the entire southern California area is dominated by northwest-trending faults. The San Jacinto Fault Zone, Elsinore Fault Zone, and Cucamonga Fault Zone are the major active faults located in the general vicinity of the Project site. Of the faults within the vicinity of the Project site, the Temecula segment of the Elsinore Fault Zone is located in the closest proximity to the Project site, approximately 1.5 miles southwest of the Project site. No active or inactive fault traces are known to traverse the Project site, and no evidence of on-site faulting was observed by CHJ Consultants during site investigation and aerial photo review. The Project site is not within a currently-designated Alquist-Priolo Earthquake Fault Zone. (CHJ Consultants, 2018, p. 10)

F. Seismic Hazards

Secondary hazards associated with earthquakes include fault rupture, ground shaking, ground failure, unstable soils and slopes, and other natural phenomenon. Each of these hazards is briefly detailed below.

1. Ground Shaking

Strong ground shaking could be expected at the site during moderate to severe earthquakes in the Project site's general region. This is common to virtually all of southern California. Intensity of ground shaking at a given



location depends primarily upon earthquake magnitude, site distance from the source, and site response (soil type) characteristics. (CHJ Consultants, 2018, p. 9)

2. *Surface Fault Rupture*

Surface rupture is a break in the ground surface during, or as a consequence of, seismic activity. Fault rupture occurs most often along pre-existing fault traces. No faults have been mapped onsite, nor in the immediate site vicinity. Accordingly, the potential for surface rupture is low. (CHJ Consultants, 2018, pp. 10, 13)

3. *Seismicity*

The Project site is within the tectonically active southern California area, and is approximately 1.5 miles from the active Elsinore fault zone. The potential exists for strong ground motion that may affect future improvements on site. Non-critical structures (commercial, residential, and industrial) are required to be designed according to the California Building Code (2016) and that of the controlling local agency. However, liquefaction/seismic slope stability analyses, critical structures, water tanks, and unusual structural designs would likely require site-specific ground motion input. (CHJ Consultants, 2018, p. 9)

4. *Liquefaction*

Liquefaction is a phenomenon in which saturated, low cohesion soils lose strength during relatively severe earthquake ground motions, with potential for adversely affecting buildings and road structures. In general, during ground motion, saturated fine sands and silty sands tend to compact and decrease in volume, resulting in an increase in pore water pressure if drainage is impeded. If the pore water pressure becomes equal to or greater than the overburden pressure, the effective stress becomes zero and, consequently, the soil loses its shear strength and is considered to be in a liquefied state. Factors known to influence the potential for liquefaction include soil type and depth, grain-size, relative density, groundwater level, degree of saturation, and both the intensity and duration of ground shaking. The Project site is located within an area identified as having a moderate potential for liquefaction. According to a previous report conducted by CHJ Consultants (2016), there is potential for liquefaction to occur within thin localized layers in the northern portion of the Project site. (CHJ Consultants, 2018, pp. 16-17)

5. *Landslides*

With exception of steep slopes to the north of the Project site, the Project site and the immediate vicinity are relatively flat and preclude the potential for instability of natural slopes. Areas north of the Project site contain bedrock outcroppings that reduce the potential for landslides that could affect the site. No evidence of on-site landslides/debris flow or rock fall was observed during CHJ Consultant's site investigation. (CHJ Consultants, 2018, p. 10)

6. *Lateral Spreading*

Lateral spreading is closely associated with liquefaction and is characterized by the finite lateral displacement of gently sloping ground during an earthquake. Deformation due to lateral spreading generally occurs on sloping ground that is underlain by potentially liquefiable soil layers. Due to the lack of shallow groundwater the potential for lateral spreading is remote. (CHJ Consultants, 2018, pp. 6, 20-22)



G. Rippability

Rippability is the ease with which soil or rock can be mechanically excavated. Two hills consisting primarily of metamorphic bedrock were removed during site reclamation, located in the northern portion of the Project site. Difficulty in ripping of the larger, western hill was encountered during site reclamation activities. Jack hammering of hard marble exposures in this area was on-going at the time site visits were conducted by CHJ Consultants. Oversize rock on the Project site has already been generated as part of grading activities associated with the reclamation areas. All oversized rock encountered on-site was reduced in size when necessary and transported to the Nichols North Mine located north of the Project site. (CHJ Consultants, 2018, p. 29)

H. Soil Hazards

1. Erosion Potential

Erosion is the process by which the upper layers of the surface (such as soils) are worn and removed by the movement of water or wind. Soils with characteristics such as low permeability and/or low cohesive strength are more susceptible to erosion than those soils having higher permeability and cohesive strength. Additionally, the slope gradient on which a given soil is located also contributes to the soil's resistance to erosive forces. Because water is able to flow faster down steeper gradients, the steeper the slope on which a given soil is located, the more readily it will erode.

Wind erosion can damage land and natural vegetation by removing soil from one place and depositing it in another. Wind erosion mostly affects dry, sandy soils in flat, bare areas, but it may occur wherever soil is loose, dry, and finely granulated. Under existing conditions, the Project site has the potential to contribute windblown or water-borne soil and sand because the Project site is undeveloped and portions of the Project site contain limited vegetative cover.

As shown on Figure 4.5-1, *Soils Map*, and as summarized in Table 4.5-1, *Summary of Project Area Soils*, 54.8% of the Project site has a "slight to moderate" erosion susceptibility, 13.9% of the Project site has a "moderate" erosion susceptibility, 15.6% of the Project site has a "high" erosion susceptibility, and 12.2% of the Project site has a "very high" erosion susceptibility. Very high susceptibility areas occur in the northwest portion of the Project site. High susceptibility areas are located along Stovepipe Creek and within the northeast portion of the Project site.

2. Expansive Soils

Expansive soils are soils that exhibit cyclic shrink and swell patterns in response to variations in moisture content. Based on expansion index testing of soil samples taken from the Project site by CHJ Consultants, it was determined that the site's soils were sufficiently granular to be non-critically expansive. (CHJ Consultants, 2018, p. 8)

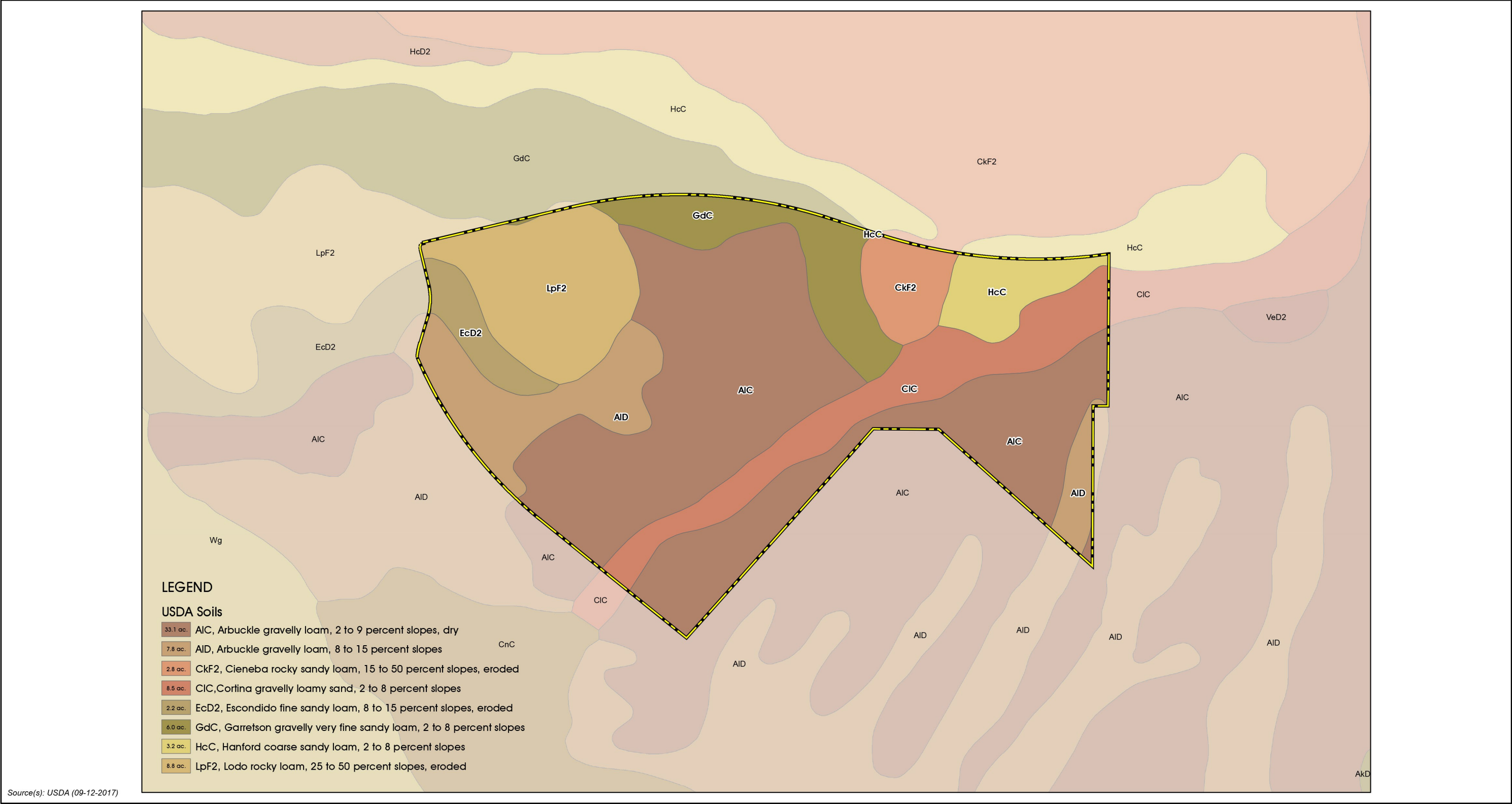


Figure 4.5-1

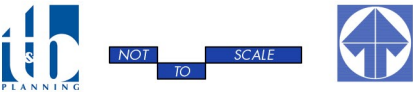




Table 4.5-1 Summary of Project Area Soils

Map Symbol	Map Unit Name	Rate of Runoff	Erosion Susceptibility	Acres in AOI	Percent of AOI
AIC	Arbuckle gravelly loam, 2 to 9 percent slopes, dry, MLRA 19	Slow to Medium	Slight to Moderate	33.1	45.60%
AID	Arbuckle gravelly loam, 8 to 15 percent slopes	Medium	Moderate	7.8	10.80%
CkF2	Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded	Rapid	High	2.8	3.90%
CIC	Cortina gravelly loamy sand, 2 to 8 percent slopes	Slow to Medium	High	8.5	11.70%
EcD2	Escondido fine sandy loam, 8 to 15 percent slopes, eroded	Medium	Moderate	2.2	3.10%
GdC	Garretson gravelly very fine sandy loam, 2 to 8 percent slopes	Slow to Medium	Slight to Moderate	6.0	8.30%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	Slow to Medium	Slight to Moderate	3.2	4.40%
LpF2	Lodo rocky loam, 25 to 50 percent slopes, eroded	Very Rapid	Very High	8.8	12.20%
Totals for Area of Interest:		--	--	72.5	100%

AOI = Area of Interest (i.e., the 72.5-acre Project site)

Source: (NRCS, n.d.; USDA, 1971)

3. ***Collapsible Soils***

Collapsible soils are soils that exhibit gradual settling or sudden sinking of the ground surface. The previous investigation conducted by CHJ Consultants (2016) recommended removal of collapsible soils located in the northern portion of the Project site, which occurred during reclamation activities in 2017. The southern portion of the Project site contains soils that are generally granular and dense; therefore, the potential for collapsible soils is considered low. (CHJ Consultants, 2018, p. 7)

4. ***Soil Types***

Review of readily available published geologic literature found that the Project site contains eight surface soil types, each of which is described below, summarized in Table 4.5-1, and shown graphically on Figure 4.5-1. (NRCS, n.d.; USDA, 1971)

□ Arbuckle Gravelly Loam – 2 to 9 percent slopes, dry (AIC)

Arbuckle Gravelly Loam (2 to 9 percent slopes) consists of well-drained soil on alluvial fans. The Arbuckle gravelly loam soil has a brown gravelly loam and pale-brown gravelly very fine sandy loam surface layer about 12 inches thick. The subsoil is brown gravelly loam and gravelly clay loam that extends to a depth of about 45 inches. This soil type exhibits moderately slow permeability, runoff is slow to medium, and the hazard of erosion is slight to moderate. Arbuckle gravelly loam (2 to 9 percent slopes) is present across approximately



33.1 acres (45.6%) of the Project site. The Arbuckle gravelly loam is found mostly in the southern area of the Project site beneath Stovepipe Creek, and in the central portion of the Project site. (NRCS, n.d.; USDA, 1971, p. 12)

□ Arbuckle Gravelly Loam – 8 to 15 percent slopes (AID)

Similar to Arbuckle Gravelly Loam – 2 to 9 percent slopes (AIC), Arbuckle Gravelly Loam (8 to 15 percent slopes) consists of well-drained soil on alluvial fans. Included within this soil are very small areas that have a gravelly very fine sandy loam surface layer, and a gravelly loam subsoil. Runoff is medium and the hazard of erosion is moderate. Arbuckle gravelly loam (eight to 15 percent slopes) is present across approximately 7.8 acres which encompasses 10.8% of the Project site. The Arbuckle gravelly loam is found mostly in the western portion of the Project site east of I-15, and the southeastern corner of the Project site west of Wood Mesa Court. (NRCS, n.d.; USDA, 1971, p. 12)

□ Cieneba Rocky Sandy Loam – 15 to 50 percent slopes, eroded (CkF2)

Cieneba Rocky Sandy Loam (15 to 50 percent slopes, eroded) consists of somewhat excessively drained soil on uplands. This soil is used for dryland grain, pasture, and range, for irrigated citrus, and for homesites. The Cieneba soils have a brown sandy loam surface layer about 14 inches thick. Underlying the surface layer is light yellowish-brown gravelly coarse sand. At a depth of approximately 22 inches is slightly acid, weathered granodiorite. Cieneba rocky sandy loam (15 to 50 percent slopes, eroded) is present across approximately 2.8 acres, which encompasses 3.9% of the Project site. The Cieneba rocky sandy loam is found mostly in the northeastern portion of the Project site south of Nichols Road. (NRCS, n.d.; USDA, 1971, p. 23)

□ Cortina Gravelly Loamy Sand – 2 to 8 percent slopes (CIC)

Cortina Gravelly Loamy Sand (2 to 8 percent slopes) consists of somewhat excessively drained and excessively drained soils on alluvial fans and in valley fills. The Cortina soils have a grayish-brown gravelly coarse sandy loam surface layer about 10 inches thick. Underneath the surface layer is grayish-brown gravelly sandy loam and very gravelly coarse sandy loam. At a depth of approximately 38 inches is light brownish-gray very gravelly coarse sand. Permeability of this soil is rapid, and the available water holding capacity is 1.0 to 1.5 inches. Runoff is rapid, and the hazard of erosion is high. Cortina gravelly loamy sand (2 to 8 percent slopes) is present across approximately 8.5 acres, which encompasses 11.7% of the Project site. The Cortina gravelly loamy sand is located at Stovepipe Creek, which traverses the southern portion of the Project site in a northeast-to-southwest orientation. (NRCS, n.d.; USDA, 1971, pp. 23-24)

□ Escondido Fine Sandy Loam – 8 to 15 percent slopes, eroded (EcD2)

Escondido Fine Sandy Loam (8 to 15 percent slopes, eroded) consists of well-drained soils on uplands. The Escondido soils have a brown fine sandy loam and very fine sandy loam surface layer about 11 inches thick. The subsoil is brown very fine sandy loam. At a depth of approximately 34 inches is weathered, metamorphosed, fine-grained sandstone and schist. This soil has moderate permeability. Runoff is medium, and the hazard of erosion is moderate. Escondido fine sandy loam (8 to 15 percent slopes, eroded) is present across approximately 2.2 acres, which encompasses 3.1% of the Project site. The Escondido fine sandy loam



is found mostly in the northwestern portion of the Project site near the I-15 off ramp. (NRCS, n.d.; USDA, 1971, p. 30)

□ Garretson Gravelly Very Fine Sandy Loam – 2 to 8 percent slopes (GdC)

Garretson Gravelly Very Fine Sandy Loam (2 to 8 percent slopes) consists of well-drained soils on alluvial fans. The Garretson gravelly very fine sandy loam soils have a brown and yellowish-brown, gravelly very fine sandy loam and gravelly loam surface layer about 29 inches thick. The underlying material is yellowish-brown, brown, and grayish-brown gravelly loam and loam, and it extends to a depth of more than 60 inches. Permeability of this soil is moderate. Runoff is slow to medium, and the hazard of erosion is slight to moderate. Garretson gravelly very fine sandy loam (2 to 8 percent slopes) is present across approximately 6.0 acres, which encompasses 8.3% of the Project site. The Garretson gravelly very fine sandy loam is found mostly central portion of the Project site along Nichols Road. (NRCS, n.d.; USDA, 1971, p. 34)

□ Hanford Coarse Sandy Loam – 2 to 8 percent slopes (HcC)

Hanford Coarse Sandy Loam (2 to 8 percent slopes) consists of well-drained and somewhat excessively drained soils on alluvial fans. The Hanford coarse sandy loam soils have a grayish-brown coarse sandy loam within the upper eight inches of the Project site. Underlying this soil is brown, stratified coarse sandy loam and loamy sand. This soil is well drained. Its permeability is moderately rapid. Runoff is slow to medium, and the hazard of erosion is slight to moderate. Hanford coarse sandy loam (2 to 8 percent slopes) is present across approximately 3.2 acres, which encompasses 4.4% of the Project site. The Hanford coarse sandy loam is found mostly in the northwestern portion of the Project site south of Nichols Road and west of Wood Mesa Court. (NRCS, n.d.; USDA, 1971, pp. 39-40)

□ Lodo Rocky Loam – 25 to 50 percent slopes, eroded (LpF2)

Lodo Rocky Loam (25 to 50 percent slopes, eroded) consists of somewhat excessively drained upland soils. The Lodo rocky loam soils have a brown gravelly loam about eight inches thick. Underlying this soil is brown shattered and weathered fine-grained metamorphosed sandstone. Depth to the sandstone varies from eight to 15 inches. The hazard of erosion is very high on this soil, and runoff is very rapid. Lodo rocky loam (25 to 50 percent slopes, eroded) is present across approximately 8.8 acres, which encompasses 12.2% of the Project site. The Lodo rocky loam is found mostly in the northwestern corner of the Project site along Nichols Road. (NRCS, n.d.; USDA, 1971, pp. 42-43)

4.5.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations governing issues related to geology and soils.

A. Federal Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially



reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2018)

B. State Regulations

1. Alquist-Priolo Earthquake Fault Zoning Act (A-P Act)

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. (CGS, 2017a)

The A-P Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. ["Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires. (CGS, 2017)

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet). (CGS, 2017a)

2. Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, § 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. (CGS, n.d.)

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones



of Required Investigation (ZORI) those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. (CGS, n.d.)

The SHMA requires site-specific geotechnical investigations be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. (CGS, n.d.)

3. *Natural Hazards Disclosure Act*

The Natural Hazards Disclosure Act, effective June 1, 1998 (as amended June 9, 1998), requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. (CGS, 2017b)

The law requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single-family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires. (CGS, 2017b)

Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard exists at the site and, if so, recommend measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers. (CGS, 2017b)

4. *Building Earthquake Safety Act*

In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "...designed and constructed to minimize fire hazards and to resist...the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, § 16000 through 16022. In addition, the California Building Code defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. (CAB, 2018)

5. *California Building Standards Code (Title 24)*

California Code of Regulations (CCR) Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as building standards (reference California Health and Safety Code § 18909). Health and Safety Code (state law) § 18902 gives CCR Title 24 the name California Building Standards Code (CBSC). (CBSC, 2018, p. 7)



The CBSC in CCR Title 24 is published by the California Building Standards Commission and it applies to all building occupancies (see Health and Safety Code §§ 18908 and 18938) throughout the State of California. Cities and counties are required by state law to enforce CCR Title 24 (reference Health and Safety Code §§ 17958, 17960, 18938(b), and 18948). Cities and counties may adopt ordinances making more restrictive requirements than provided by CCR Title 24, because of local climatic, geological, or topographical conditions. Such adoptions and a finding of need statement must be filed with the California Building Standards Commission (Reference Health and Safety Code §§ 17958.7 and 18941.5). (CBSC, 2018, pp. 7-9)

6. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain



the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site is located in the Santa Ana Watershed, which is within the purview of Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.

C. Local Regulations

1. City of Lake Elsinore Municipal Code

The City of Lake Elsinore Municipal Code (Chapter 14.08, "City of Lake Elsinore Stormwater/Urban Runoff Management and Discharge Controls Ordinance") protects and enhances the water quality of City watercourses, waterbodies, groundwater, and wetlands in a manner pursuant to and consistent with the California Water Code Sections 13000 *et. seq.* (Lake Elsinore, 2018)

4.5.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to geology and soils if the Project or any Project-related component would:

- a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:*
 - i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
 - ii) *Strong seismic ground shaking.*
 - iii) *Seismic-related ground failure, including liquefaction.*
 - iv) *Landslides.*
- b. *Result in substantial soil erosion or the loss of topsoil;*
- c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;*
- d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (since renamed as the California Building Code), creating substantial direct or indirect risks to life or property; or*
- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

The above listed thresholds are derived directly from Section VII of Appendix G to the CEQA Guidelines and address typical adverse effects due to geological conditions (OPR, 2018).



As a general matter, CEQA does not require the analysis of the environment's impact on the proposed Project (see the decision reached by the Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478). Therefore, CEQA does not require that the potential geology impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the proposed Project. Thus, impacts to the Project from geological sources are provided for information purposes only.

4.5.4 IMPACT ANALYSIS

Threshold a: *Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:*

- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
- ii) Strong seismic ground shaking?*
- iii) Seismic-related ground failure, including liquefaction?*
- iv) Landslides?*

A. Potential for Earthquake Fault Rupture

The Project site is not located in an Alquist-Priolo Earthquake Fault Zone nor any regional or local fault zones, including Elsinore Fault Zone, San Jacinto Fault Zone, San Andreas Fault Zone, and San Joaquin Hills Thrust Fault Zone. The nearest Alquist-Priolo Earthquake Fault Zone is the Elsinore Fault, which is located approximately 1.5 miles southwest of the Project site. No active or inactive fault traces are known to traverse the Project site, and no evidence of on-site faulting was observed by CHJ Consultants during site investigation and aerial photo review. Because the Project site is not located on an Alquist-Priolo Earthquake Fault Zone or any regional or local fault zone, there is no potential for the Project to expose people or structures to substantial adverse effects associated with rupture of any Alquist-Priolo Fault Zones. (CHJ Consultants, 2018, p. 11) Impacts due to Alquist-Priolo Fault Zones would not occur.

B. Potential for Strong Seismic Ground Shaking

The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. The ground-shaking risk is not considered substantially different than that of other similar properties in the southern California area. The Project area is within a seismically-active region containing major fault zones. As mentioned above, there are no active or inactive fault traces are known to traverse the Project site, and no evidence of on-site faulting was observed by CHJ Consultants during site investigation and aerial photo review. The nearest fault zone, Elsinore Fault Zone, occurs approximately 1.5 miles southwest from the Project site. Some additional major active nearby faults that could produce ground-shaking effects include the Cucamonga, San Jacinto, and San Andreas Fault Zones, among others. The potential rupture of any of these faults could result in significant



structural damage and human injury or casualty. The Project would be required to construct all proposed structures in accordance with the CBC (Title 24) and Title 15 (Buildings and Construction) of the City of Lake Elsinore Municipal Code. The CBC and Municipal Code Title 15 have been designed to preclude significant adverse effects associated with strong seismic ground shaking.

However, a significant impact could occur if the Project did not comply with the site-specific recommendations of the Project's geotechnical study (*Technical Appendix D*). The Project's Geotechnical Evaluation includes recommendations that would reduce seismic risks to "acceptable level" as defined by the California Code of Regulations. Accordingly, prior to mitigation implementing the geotechnical study recommendations, the proposed Project has the potential to expose people or structures to substantial adverse effects, including, loss, injury, or death, as a result of strong seismic ground shaking. This is evaluated as a significant impact for which mitigation is required.

C. Potential for Seismic-Related Ground Failure/Liquefaction

As mentioned in Subsection 4.5.1F.4, the proposed Project site is located in an area identified as having a "moderate" potential for liquefaction hazards (Lake Elsinore, 2011b, Figure 3.11-3; CHJ Consultants, 2018, p. 16). Based on a previous report conducted by CHJ Consultants (2016), liquefaction has the potential to occur within thin localized layers in the northern portion of the Project site (CHJ Consultants, 2018, p. 17). However, due to the Project site's upper non-liquefiable layer, the potential for significant manifestation after grading is limited. Moreover, the Project site is underlain with bedrock and sandy gravel (CHJ Consultants, 2018, p. 6). In these areas, it is anticipated that less than 1½ inches of seismic-induced settlement in saturated sand would occur within development of the Project site, and the impact of seismic settlement is considered to be low (CHJ Consultants, 2018, p. 18). Additionally, because there are no known faults located on the Project site or seismic-related ground failure, there is no potential for the Project to expose people or structures to substantial adverse effects related to ground rupture or seismic-related ground failure. Additionally, the Project is required to be designed and constructed in accordance with the most recent applicable seismic safety guidelines, including the CBC and Title 15 (Buildings and Construction) of the City of Lake Elsinore Municipal Code. However, there is a remote potential that future structures on-site would be subject to liquefaction hazards in the event that future implementing developments do not comply with the recommendations of the Project's geotechnical study (*Technical Appendix D*). Accordingly, impacts due to seismic-related ground failure, including liquefaction, would be potentially significant prior to mitigation.

D. Landslide Potential

As shown on Figure 3.5, *Percent Slope* of the Lake Elsinore General Plan, the Project site is located in an area with a 0-15% percent slope grade, with a small portion of the Project site falling in the 15%-25% percent slope range. However, areas immediately to the north of the Project are shown on Figure 3.5 as having slopes exceeding 35% in gradient. (Lake Elsinore, 2011a, Figure 3.5) Although the slopes to the north of the Project site consist of vegetated slopes with rock outcroppings, CHJ Consultants did not observe any evidence of landslides, indicating there is little potential that future buildings on site could be affected by landslide hazards. Additionally, the Project site exhibits relatively flat topography, and all slopes created by the Project would be constructed at a maximum gradient of 2:1 (horizontal:vertical). However, the Project proposes slopes in the western portion of the site that exceed ten feet in height. Although these slopes likely would not be subject to



landslide hazards, there is a remote potential for landslides to occur if the Project were to fail to comply with the site-specific recommendations of the Project's geotechnical study (Technical Appendix D). This is evaluated as a significant impact for which mitigation is required.

Threshold b: Would the Project result in substantial soil erosion or the loss of topsoil?

Implementation of the proposed Project has the potential to result in soil erosion. The analysis below summarizes the likelihood of the Project to result in substantial soil erosion during temporary construction activities and long-term operation. As shown in Table 4.5-1, 54.8% of the Project site has a "slight to moderate" erosion susceptibility, 13.9% of the Project site has a "moderate" erosion susceptibility, 15.6% of the Project site has a "high" erosion susceptibility, and 12.2% of the Project site has a "very high" erosion susceptibility. Very high susceptibility areas occur in the northwest portion of the Project site. High susceptibility areas are located at Stovepipe Creek and within the northeast portion of the Project site.

1. Impact Analysis for Temporary Construction-Related Activities

Proposed grading, and construction activities to the Project site would expose underlying soils and disturb surficial soils on the respective properties. Exposed soils would be subject to erosion during rainfall events or high winds due to the removal of stabilizing vegetation and exposure of these erodible materials to wind and water.

Pursuant to the requirements of the State Water Resources Control Board, the Project Applicant is required to obtain a Nation Pollutant Discharge Elimination System (NPDES) permit for construction activities, including proposed grading. The NPDES permit is required for all projects that include construction activities such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. The City's Municipal Separate Storm Sewer System (MS4) NPDES Permit requires the Project Applicant to prepare and submit to the City for approval a Project-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would identify a combination of erosion control and sediment control measure (i.e., Best Management Practices (BMPs)) to reduce or eliminate sediment discharge to surface water from storm water and non-stormwater source discharges during construction. In addition, proposed construction activities would be required to comply with SCAQMD Rule 403, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion. Rule 403 requires that certain construction practices be following that limit dust and dirt from leaving the construction site. For example, no dust is allowed to be tracked out of the site by more than 25 feet. In addition, proposed construction activities would be required to comply with the City's Municipal Code (Chapter 14.08) to protect and enhance the water quality of the City, and Municipal Code (Chapter 15.04), which requires the Project to prepare an erosion control plan to be used during the rainy season. With mandatory compliance to the requirements noted in the Project's SWPPP, as well as mandatory compliance to applicable regulatory requirements including but not limited to SCAQMD Rule 403, and Municipal Code Chapter 14.08 and 15.04, the potential for water and/or wind erosion impacts during Project construction would be reduced to less-than-significant levels.

2. Impact Analysis for Long-Term Operations

Following construction, wind and water erosion on the Project site would be minimized, as the disturbed areas would be landscaped or covered with impervious surfaces, and drainage would be controlled through a storm



drain system. As discussed in detail in EIR Subsection 4.8, *Hydrology and Water Quality*, the Project would not substantially increase the rate or amount of runoff leaving the site, as compared to existing conditions. As part of the Project, the City is requiring the construction of stormwater facilities (such as detention basins) to reduce on-site runoff flows to pre-development conditions. As discussed in Subsection 4.8, construction of detention basins and water quality basins on-site would ensure that post-development rates and amounts of runoff are similar or slightly reduced as compared to those occurring under existing conditions. Accordingly, implementation of the Project would not increase the risk of siltation or erosion in stormwater discharged from the Project site. In addition, the WQMP for the Project requires post-construction measures to ensure on-going protection against erosion. Compliance with the WQMP would be required as a condition of Project approval, and long-term maintenance of on-site water quality features also would be required. Based on the foregoing, implementation of the Project would not significantly increase the risk of long-term wind or water erosion on- or off-site, and impacts would be less than significant.

Threshold c: Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As indicated under the analysis of Threshold a, impacts associated with liquefaction hazards, seismic-related ground failure, and landslides would be significant prior to mitigation. Following mitigation requiring compliance with the recommendations of the Project's geotechnical study (*Technical Appendix D*), impacts would be reduced to less-than-significant levels.

Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore pressure build-up or liquefaction in a shallow underlying deposit during an earthquake. Due to the lack of shallow ground water, the potential for lateral spreading is identified by CHJ Consultants as being "remote." Nonetheless, a significant impact could occur in the event that future implementing developments do not comply with the recommendations of the Project's geotechnical study (*Technical Appendix D*). Accordingly, impacts due to lateral spreading would be potentially significant prior to mitigation.

According to the County of Riverside, portions of the Project site are located in areas identified as potentially susceptible to subsidence associated with groundwater or petroleum fluid withdrawal, peat oxidation, or hydro-consolidation. Due to the lack of peat or petroleum-associated deposits, petroleum withdrawal and peat oxidation do not appear to be hazards. Based on observations during reclamation activities in 2017 conducted by CHJ Consultants, the alluvial materials within the northern portion of the Project site are classified as late Pleistocene; therefore, subsidence due to groundwater withdrawal is considered minimal. Moreover, hydro-collapsible soils were removed and recompactd during reclamation activities. The southern portion of the Project site is underlain with generally granular and dense soils; therefore, hydro-consolidation is considered low. However, impacts would be potentially significant if the Project didn't comply with the geotechnical study (CHJ Consultants, 2018, p. 7)

In summary, impacts due to unstable geologic units or soils that could potentially result in on-or off-site lateral spreading, liquefaction, landslide, subsidence, and collapse would be potentially significant prior to mitigation requiring compliance with geotechnical study recommendations.



Threshold d: Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (since renamed as the California Building Code), creating substantial direct or indirect risks to life or property?

Appendix G of the CEQA Guidelines references Table 18-1-B of the 1994 Uniform Building Code (UBC). This Table no longer exists. The adopted 2001 California Building Code included a “Classification of Expansive Soil” that correlated an expansion index with the potential for soil expansion. The subsequent updates to the California Building Code (2007 and 2010), contained information on expansive soils, but no longer included a reference to Table 18-1-B. The Building Code currently in effect, the 2016 CBC, references ASTM D-4829, a standard procedure for testing and evaluating the expansion index (or expansion potential) of soils established by ASTM International, which was formerly known as the American Society for Testing and Materials (ASTM).

Based on laboratory test results, the on-site soils are primarily silty sand to sand and are expected to have a very low potential for expansion. Accordingly, the Project would not create substantial risks to life or property from exposure to expansive soils, and a less-than-significant impact would occur.

Threshold e: Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed Project would be required to connect to the City’s municipal wastewater system and would not be permitted to use septic tanks or alternative wastewater disposal systems. Accordingly, the Project would result in no impact related to the use or performance of septic tanks and/or alternative wastewater systems.

4.5.5 CUMULATIVE IMPACT ANALYSIS

With exception of erosion hazards, potential geologic and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other existing, planned, or proposed development. That is, thresholds including fault rupture, seismic ground shaking, liquefaction, landslides, expansive soils and other geologic hazards would involve effects to (and not from) the proposed development and are specific to on-site conditions. Accordingly, addressing these potential hazards for the proposed development would involve using measures to conform to existing requirements, and/or site-specific design and construction efforts that have no relationship to, or impact on, off-site areas. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no connection to similar potential issues or cumulative effects to or from other properties. Cumulatively-considerable impacts would be less than significant.

For purposes of evaluating potential erosion hazards, the cumulative study area is defined as the Santa Ana River Watershed, as areas outside this watershed have no potential to contribute to any erosion impacts that may result from the Project. As discussed under Threshold b, during both near-term construction and long-term operation, measures would be incorporated into the Project’s design to ensure that significant erosion hazards do not occur. Other developments within the cumulative study area would be required to comply with



similar requirements, such as the need to obtain an NPDES permit and mandatory compliance with the resulting SWPPPs and WQMPs. All projects in the cumulative study area also would be required to demonstrate that measures have been incorporated to ensure that development does not result in substantial increases in the amount or rate of runoff, which could in turn increase soil erosion. Further, all projects in the cumulative study area also would be required to comply with Chapter 15.02 of the City of Lake Elsinore's Municipal Code (or similar City or County ordinances) and SCAQMD Rule 403, which would preclude wind-related erosion hazards during construction. Therefore, because the Project would not result in significant erosion impacts, and because other projects within the cumulative study area would be subject to similar requirements to control erosion hazards during construction and long-term operation, cumulatively-considerable impacts associated with wind and water erosion hazards are evaluated as less than significant.

4.5.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Significant Direct Impact. The Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone or a County Fault Hazard Zone. Although the Project site is located in a seismically active area of southern California, this risk is not considered substantially different than that of other similar properties in the southern California area. As a mandatory condition of Project approval, the Project would be required to construct proposed structures in accordance with the CBC (Title 24) and Title 15 (Buildings and Construction) of the City of Lake Elsinore Municipal Code. The CBC and Title 15 of the City's Municipal Code have been designed to attenuate the risk to life or property to less than significant levels. Nonetheless, the Project's site-specific geotechnical study (*Technical Appendix D*) identifies a number of design recommendations to attenuate the potential for seismic ground shaking hazards. The Project's potential to expose people or structures to substantial adverse effects, including loss, injury, or death, as a result of strong seismic ground shaking is evaluated as a potentially significant impact prior to mitigation.

Threshold b: Less-than-Significant Impact. The Project would not result in substantial soil erosion or loss of topsoil. The Project Applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities and adhere to a Storm Water Pollution Prevention Plan (SWPPP) as well as SCAQMD Rule 403 and City of Lake Elsinore Municipal Code Chapters 14.08 and 15.04. With mandatory compliance to these regulatory requirements, the potential for water and wind erosion impacts during construction would be less than significant. Following development, wind and water erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, the Project is required by law to implement a WQMP during operation, which would preclude substantial erosion impacts in the long-term.

Threshold c: Significant Direct Impact. Impacts due to unstable geologic units or soils that could potentially result in on- or off-site lateral spreading, liquefaction, landslide, subsidence, and collapse would be potentially significant prior to mitigation.

Threshold d: Less-Than-Significant Impact. The Project site contains soils with low susceptibility to expansion. Potential hazards associated with expansive soils would, thus, be less than significant.



Threshold e: No Impact. No septic tanks or alternative wastewater disposal systems are proposed to be installed on the Project site. Accordingly, no impact would occur associated with soil compatibility for wastewater disposal systems.

4.5.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

A. Applicable County Regulations and Design Requirements

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

- The Project is required to comply with the provisions of City Municipal Code Chapters 15.02 and 15.04, which incorporate the 2016 California Building Standards Code (California Code of Regulations, Title 24).
- The Project shall comply with all applicable provisions of Chapter 14.08 of the City of Lake Elsinore Municipal Code related to stormwater runoff.
- The Project is required to comply with the provisions of SCAQMD Rule 403 by addressing blowing dust from the Project's construction activities.
- The Project is required to comply with the provisions of the Project's National Pollution Discharge Elimination System (NPDES) permit, and the Project's Storm Water Pollution Prevention Plan (SWPPP). Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges.

B. Mitigation

The Project would follow the recommendations contained in the Project's geotechnical report, appended to this EIR as *Technical Appendix D*. Pursuant to the recommendations included in *Technical Appendix D*, following mitigation measures shall apply to preclude potential impacts due to geological and/or soil conditions:

- MM 4.4-1 Prior to issuance of grading or building permits, the City Building and Safety Division shall verify that all of the recommendations given in the Project's February 2, 2018 "Geotechnical Investigation and Geologic Evaluation Report Tentative Tract No. 37305 Lake Elsinore, California" by CHJ Consultants, are incorporated into the construction and grading plans. The recommendations shall include, but not be limited to the following:
- Perform earthwork in accordance with the General Earthwork and Grading Specifications in *Technical Appendix D*. The recommendations contained in *Technical Appendix D*, are general grading specifications provided for typical grading projects and some of the recommendations may not be strictly applicable to the proposed Project.



The contract between the Project Applicant and earthwork contractor shall be worded such that it is the responsibility of the contractor to place fill properly in accordance with the recommendations of the Geotechnical Report, the specifications in Appendix D of the Geotechnical Report, applicable City Grading Ordinances, notwithstanding the testing and observation of the geotechnical consultant during construction.

- Existing vegetation, trash, debris, and other deleterious materials shall be removed and wasted from the site prior to commencing removal of unsuitable soils and placement of compacted fill materials. Additionally, all pre-existing foundations elements, standpipes, irrigation lines, and utility conduits shall be removed and wasted off-site. Concrete can be placed in the fill provided it is broken down into pieces smaller than 12 inches (largest dimension). Cesspools and septic systems shall be properly removed and/or backfilled in accordance with the local governing agency.
- Soil, undocumented fills, alluvium, weathered portions of the older alluvium, and bedrock shall be removed in areas planned to receive compacted fill intended to support settlement-sensitive structures such as buildings, roads and underground improvements. The resulting undercuts shall be replaced with engineered fill. It shall be noted that local variations can be expected requiring an increase in the depth of removal for unsuitable and weathered deposits. The extent of removals can best be determined in the field during grading when observation and evaluation can be performed by the soil engineer and/or engineering geologist. Removal bottoms shall expose saturated ($S > 85\%$) alluvium, very old alluvial fan deposit, and/or bedrock. The removal bottom shall be observed and mapped by the engineering geologist prior to fill placement. The bottoms shall be scarified to a depth of approximately six (6) inches, brought to near optimum moisture content and recompact to at least 93 percent relative compaction in accordance with ASTM D1557.
- Footings for any structures shall not be allowed to span from cut to fill or from shallow fill to deep fill soil conditions. Should grading result in a situation where footings bear on more than eight (8) feet of compacted fill, the sub-excavation of the building pad shall be deepened as necessary so as to provide a uniform fill mat below bottom of footing. The deepening of sub-excavation will involve additional removals of older alluvium or bedrock. The uniform mat shall not vary in thickness from one (1) side of the building pad area to the other by more than 50 percent, 10 feet maximum. The “building pad area” includes the structure footprint and the zone of influence consisting of a 1(h):1(v) downward projection from the structure footing.

All footing shall rest entirely upon competent native soils or minimum of 12 inches of properly compacted fill material. The sub-excavation shall extend at least two (2) feet laterally beyond the footing lines, where possible. Foundation concrete shall be placed in neat excavations with vertical sides, or the concrete shall be formed and the excavations properly backfilled as recommended for compacted fill.

The on-site soils shall provide adequate quality fill material, provided they are free from roots, other organic matter and deleterious materials. Rock or similar irreducible material with a maximum dimension greater than six (6) inches shall not be buried or placed within



the top 10 feet of fills. Import fill shall be inorganic, non-expansive, granular soil free from rocks or lumps greater than six (6) inches in maximum dimension. The contractor shall notify the geotechnical engineer of import sources sufficiently ahead of their use so that the sources can be observed and approved as to the physical characteristic of the import material. Fills shall be spread in near-horizontal layers, approximately eight (8) inches in thickness.

- The contractor shall make their own investigations and estimates of shrinkage. Final grades shall be adjusted and/or contingency plans to import or export material shall be made to accommodate possible variations in actual quantities during site grading.
- Materials between approximately 12 and 48 inches in size may be placed in areas of fill depth greater than approximately 20 feet below finish grade with the approval of the building official. Areas shall be designated on plans as rock disposal areas. The oversized rock shall be placed in windrows and adequately spaced to prevent nesting. Then, sandy matrix material shall be flooded between the rocks to fill any void spaces. Continuous observation of the rock placement and flooding operation shall be conducted by the geotechnical engineer.
- All grades shall provide effective drainage away from the buildings during and after construction and shall be maintained throughout the life of the structures. Water retained next to the building can result in soil movements greater than those discussed in the Project's geotechnical report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roofs shall have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the buildings. The Project shall have a minimum horizontal setback distance of 10 feet from the perimeter of any building and the high-water elevation of the nearest stormwater retention basin. Setbacks for structures shall be maintained from the steep slopes in Stovepipe Wash. The Project shall have a minimum horizontal distance equivalent to 1.5 times the height of the slope be maintained for all structures from the top of the slope. If significant erosion/scour is expected to occur along Stovepipe Wash, greater setbacks would be necessary.
- Exposed ground should be sloped and maintained at a minimum three (3) percent away from the buildings for at least 10 feet beyond the perimeter of the buildings. After building construction and landscaping, final grades shall be verified to document effective drainage has been achieved. Grades around the structures shall also be periodically inspected and adjusted as necessary as part of the structures' maintenance program.
- Shallow excavations for the proposed building structures are anticipated to be accomplished with conventional construction equipment except for the area of hard bedrock in the west portion of the Nichols Road grading project. Upon completion of filling and grading, care shall be taken to maintain the subgrade water content prior to construction of floor slabs. Construction traffic over the completed subgrades shall be avoided. The site shall be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over, or adjacent to, construction areas shall



be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material shall be removed, or the materials shall be scarified, moisture conditioned, and recompacted, prior to floor slab or pavement construction. At a minimum, excavations shall be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or State regulations.

- The earthwork efforts shall be monitored under the direction of the geotechnical engineer. Monitoring shall include documentation of adequate removal of vegetation and top soil, proof-rolling and mitigation of areas delineated by the proof-roll to require mitigation.

Each lift of compacted fill shall be tested, evaluated, and reworked as necessary until approved by the geotechnical engineer prior to placement of additional lifts. Each lift of fill shall be tested for density and water content at a frequency of at least one (1) test for every 2,500 square feet of compacted fill in the structure areas and 5,000 square feet in pavement areas. One density and water content test shall be performed for each 1-foot of backfill, for every 250 linear feet of compacted utility trench backfill.

- Seismic design shall be designed in accordance with 2016 CBC guidelines and recommendations provided in the seismic design parameters table on pages 15-16 in *Technical Appendix D*.
- Shallow foundation of the Project site shall be designed in accordance with 2016 CBC guidelines and recommendations provided in the shallow foundation design parameters table on page 19 in *Technical Appendix D*.

The base of all foundation excavations shall be free of water and loose soil, prior to placing concrete. Concrete shall be placed soon after excavating to reduce bearing soil disturbance. Care shall be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations shall be removed/reconditioned before foundation concrete is placed. Over-excavation for structure fill placement below footings shall be conducted as shown on page 20 in *Technical Appendix D*.

- Structures with unbalanced backfill levels on opposite sides shall be designed for earth pressures at least equal to values indicated in the lateral earth pressure design parameters table on page 21 in *Technical Appendix D*.

Backfill placed against structures shall consist of granular soils or low plasticity cohesive soils. Granular backfill must extend out and up from the base of the wall at an angle of at least 45 and 60 degrees from vertical for the active and passive cases, respectively.

Backfill behind retaining walls shall consist of a soil of sufficient granularity that the backfill will properly drain. Surface drainage shall be provided to prevent ponding of water behind walls. A drainage system consisting of either or both of the following shall be installed behind all retaining walls: a 4-inch diameter perforated PVC (Schedule 40) pipe or equivalent at the base of the stem encased in 2 cubic feet of granular drain material per linear foot of pipe or synthetic drains such as Enkadrain, Miradrain, Hydroway 300 or equivalent. Perforations in the PVS shall be 3/8 inch in diameter and shall be placed facing



down. Granular drain material shall be wrapped with filter cloth to prevent clogging of the drains with fines. Walls shall be waterproofed to prevent nuisance seepage and damage.

- Floor slabs shall bear on compacted fills or competent native soils. For slabs bearing on compacted fill, the top 12 inches of soil shall be compacted to 95 percent relative compaction. Finish-graded surfaces shall be rolled to provide smooth and dense surfaces. Slabs to receive moisture-sensitive coverings shall be provided with a vapor retarder/barrier. The vapor retarder/barrier shall be designed and constructed according to the American Concrete Institute 302.1R, Concrete Floor and Slab Construction, which addresses moisture vapor retarder/barrier construction. At a minimum, the vapor retarder/barrier shall comply with ASTM E1745 and have a nominal thickness of at least 10 mils. The vapor retarder/barrier shall be properly sealed, per the manufacturer's recommendations, and protected from punctures and other damage. The vapor barrier shall be placed directly on the compacted soil with a minimum 4-inch thick layer of dry sand on top of the vapor barrier.
- Presented on page 24 in *Technical Appendix D* are preliminary pavement sections for a range of traffic indices and an assumed Resistance-Value (R-Value) of 37 and 32 for asphalt concrete (AC) pavement. R-Value testing of the subgrade soils shall be performed during precise grading operations to verify the actual R-Value. The project Civil Engineer or Traffic Engineer shall select traffic indices that are appropriate for the anticipated pavement usage and level of maintenance desired through the pavement life. Final pavement structural sections will be dependent on the R-value of the subgrade materials and the traffic index for the specific street or area being addressed. The pavement sections are subject to the review and approval of the City of Lake Elsinore. Pavement subgrade soils shall be at or near optimum moisture content and shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D1557 and should conform with the specification listed in Section 26 of the *Standard Specifications for the State of California Department of Transportation* (Caltrans) or Section 200-2 of the *Standard Specifications for Public Works Construction* (Green Book). The AC shall conform to Section 26 of the Caltrans Standard Specifications or Section 203-6 of the Green Book.
- Pavements shall be sloped to provide rapid drainage of surface water. The pavement subgrade shall be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet shall be provided to remove water from the granular subbase.
- The geotechnical engineer shall provide preventive maintenance to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing).
- The geotechnical engineer shall provide the following recommendations in the design and layout of pavements:



- Final grade adjacent to paved areas shall slope down from the edges at a minimum 2 percent.
- Subgrade and pavement surfaces shall have a minimum 2 percent slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter, and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

4.5.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a: Less-than-Significant Impact with Mitigation Incorporated: Implementation of Mitigation Measure MM 4.4-1 would ensure that the Project implements the recommendations of the Project's geotechnical study (*Technical Appendix D*), which in turn would ensure measures are implemented to address potential impacts due to the exposure of people or structures to adverse effects, including loss, injury, or death as a result of strong seismic ground shaking. Implementation of the required mitigation would ensure that impacts are reduced to less-than-significant levels.

Threshold c: Less-than-Significant Impact with Mitigation Incorporated: Implementation of Mitigation Measure MM 4.4-1 would ensure that the Project implements the recommendations of the Project's geotechnical study (*Technical Appendix D*), thereby ensuring that measures are incorporated into the Project's design to preclude impacts associated with lateral spreading, liquefaction, and collapse. With implementation of the required mitigation, impacts would be less than significant.



4.6 GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based in part on a greenhouse gas analysis (GHGA) prepared for the Project by Urban Crossroads, Inc., titled, “Nichols Ranch Greenhouse Gas Analysis, which is dated August 29, 2018 and appended to this EIR as *Technical Appendix E* (Urban Crossroads, 2018b).

4.6.1 EXISTING CONDITIONS

A. Introduction to Global Climate Change

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These historical changes to the earth’s climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth’s atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years. (Urban Crossroads, 2018b, p. 8)

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. (Urban Crossroads, 2018b, p. 8)

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, CO₂ (carbon dioxide), N₂O (nitrous oxide), CH₄ (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. (Urban Crossroads, 2018b, p. 9)

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the earth’s average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The cumulative accumulation of these gases in the earth’s atmosphere is considered to be the cause for the observed increase in the earth’s temperature. (Urban Crossroads, 2018b, p. 9)



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 CO₂e greenhouse gas emissions. Despite a population increase of 16 percent 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. (Urban Crossroads, 2018b, pp. 9-10)

B. Greenhouse Gas Emissions Inventories

1. Global

Worldwide anthropogenic (human) GHG emissions are tracked by the Intergovernmental Panel on Climate Change (IPCC) 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, and are shown in Table 4.6-1, *Top GHG Producer Countries and the European Union*. For the Year 2016, the sum of these emissions totaled approximately 28,747,554 Gg CO₂e.¹ The GHG emissions in more recent years may differ from the inventories presented in Table 4.6-1; however, the data is representative of currently available inventory data. (Urban Crossroads, 2018b, p. 8)

Table 4.6-1 Top GHG Producer Countries and the European Union

Emitting Countries	GHG Emissions (Gg CO₂e)
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

(Urban Crossroads, 2018b, Table 2-1)

2. United States

As noted in Table 4.6-1, 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 CO₂, representing approximately 81.6 percent of total greenhouse gas emissions. Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 93.5 percent of the GHG emissions. (Urban Crossroads, 2018b, p. 9)

¹ The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2016 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China were taken in 2012, while the most recent GHG emissions for India were taken in 2010.



3. *State of California*

CARB compiles GHG inventories for the State of California. Based upon the 2018 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2016 greenhouse gas emissions inventory, California emitted 429.4 MMTCO₂e including emissions resulting from imported electrical power in 2015. (Urban Crossroads, 2018b, p. 9)

4. *Project Site*

At the time the Notice of Preparation (NOP) for this EIR was issued (May 25, 2018), the southern portions of the Project site were vacant, while the northern portions of the Project site were undergoing reclamation activities. Although GHG emissions were occurring in association with reclamation activities, all reclamation activities on the site will have ceased prior to implementation of the proposed Project. Therefore, for purposes of analysis, it is assumed that the Project produces only nominal GHG emissions under existing conditions.

C. *Greenhouse Gases*

For the purposes of this analysis, 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. (Urban Crossroads, 2018b, p. 10)

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 in Table 4.6-2, *Global Warming Potential and Atmospheric Lifetime of Select GHGs*. As shown in Table 4.6-2, GWP for the Second Assessment Report (SAR), the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride and GWP for the IPCC's 4th Assessment Report (AR4) range from 1 for carbon dioxide to 22,800 for sulfur hexafluoride. (Urban Crossroads, 2018b, pp. 12-13)

Water Vapor: Water vapor (H₂O) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. (Urban Crossroads, 2018b, p. 10)

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus

further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth’s surface and heat it up). (Urban Crossroads, 2018b, p. 10)

Table 4.6-2 Global Warming Potential and Atmospheric Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)	
		Second Assessment Report (SAR)	4 th Assessment Report (AR4)
Carbon Dioxide	50-200	1	1
Methane	12 ± 3	21	25
Nitrous Oxide	114	310	298
HFC-23	270	11,700	14,800
HFC-134a	14	1,300	1,430
HFC-152a	1.4	140	124
Sulfur Hexafluoride (SF ₆)	3,200	23,900	22,800

(Urban Crossroads, 2018b, Table 2-2)

There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include: evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves. (Urban Crossroads, 2018b, p. 10)

Carbon Dioxide: Carbon dioxide (CO₂) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks. (Urban Crossroads, 2018b, pp. 10-11)

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, CO₂ concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent.



Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. (Urban Crossroads, 2018b, p. 11)

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. (Urban Crossroads, 2018b, p. 11)

Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning. (Urban Crossroads, 2018b, p. 11)

Nitrous Oxide: Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage). (Urban Crossroads, 2018b, p. 11)

Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction. (Urban Crossroads, 2018b, p. 11)

Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation. (Urban Crossroads, 2018b, p. 11)

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. (Urban Crossroads, 2018b, p. 12)

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases, they are one of three groups with the highest global



warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a ($\text{CF}_3\text{CH}_2\text{F}$), and HFC-152a (CH_3CHF_2). 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. (Urban Crossroads, 2018b, p. 12)

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The U.S. EPA estimates that concentrations of CF_4 in the atmosphere are over 70 ppt. No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. (Urban Crossroads, 2018b, p. 12)

Sulfur Hexafluoride: Sulfur hexafluoride (SF_6) 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. (Urban Crossroads, 2018b, p. 12)

D. Effects of Climate Change in California

1. Public Health Effects

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range (3-5.5°F) to 75 to 85 percent 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 percent more frequent if GHG emissions are not significantly reduced. (Urban Crossroads, 2018b, p. 13)

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 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. (Urban Crossroads, 2018b, p. 13)



2. *Water Resources / Supply Effects*

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages. (Urban Crossroads, 2018b, p. 13)

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding. (Urban Crossroads, 2018b, p. 14)

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply. (Urban Crossroads, 2018b, p. 14)

3. *Agriculture Effects*

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO₂ 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 O₃ pollution, which makes plants more susceptible to disease and pests and interferes with plant growth. (Urban Crossroads, 2018b, p. 14)

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts. (Urban Crossroads, 2018b, p. 14)

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global



climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates. (Urban Crossroads, 2018b, p. 14)

4. *Forest and Landscape Effects*

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation. (Urban Crossroads, 2018b, pp. 14-15)

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change. (Urban Crossroads, 2018b, p. 15)

5. *Sea Level Effects*

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. (Urban Crossroads, 2018b, p. 15)

E. *Human Health Effects*

The potential health effects related directly to the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects such as the 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 4.6-1, *Summary of Projected Global Warming Impact*, presents the potential impacts of global warming. (Urban Crossroads, 2018b, p. 15)

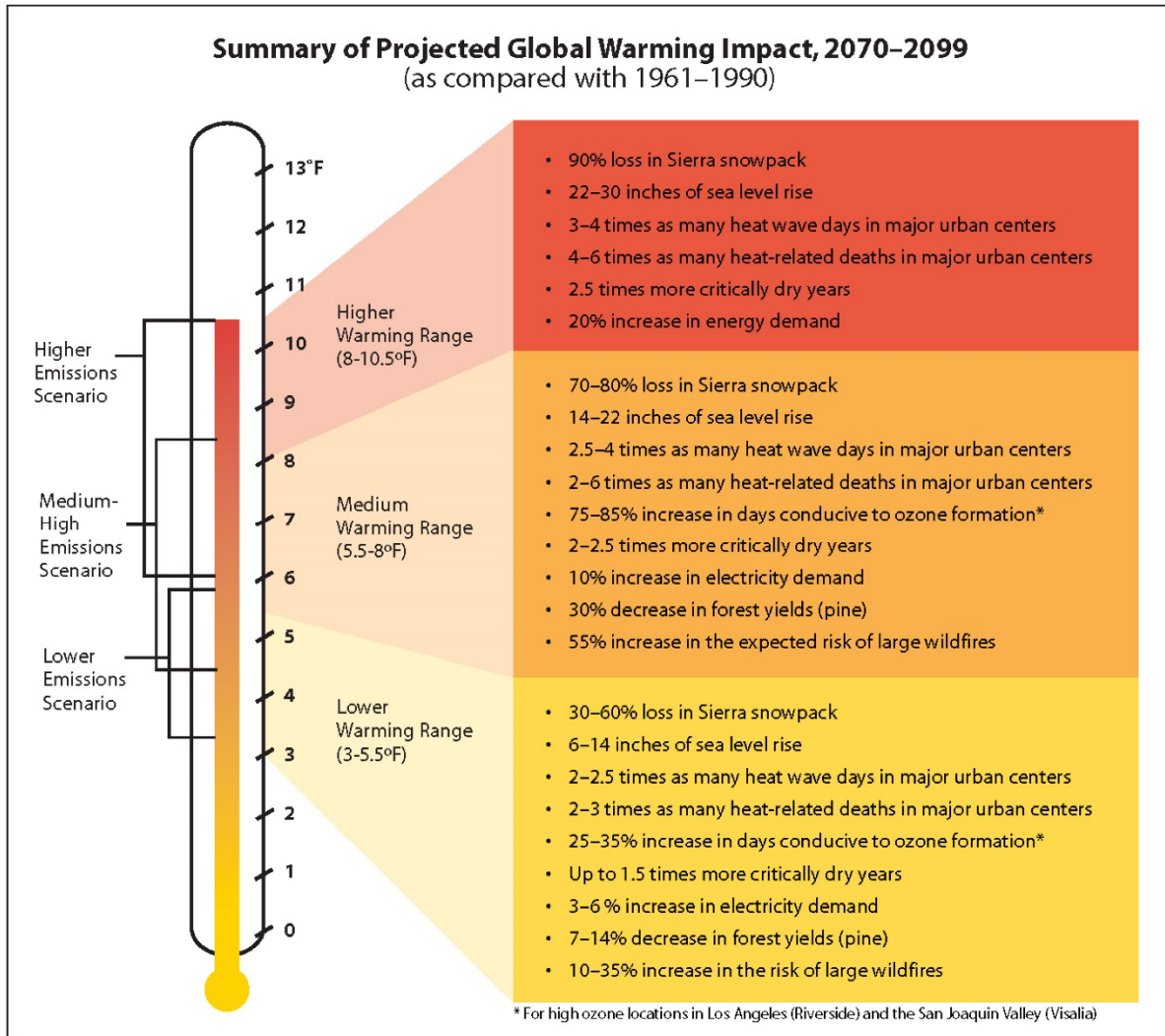
Specific health effects associated with directly emitted GHG emissions are as follows:

- 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. (Urban Crossroads, 2018b, p. 15)

Figure 4.6-1 Summary of Projected Global Warming Impact



(Urban Crossroads, 2018b, Exhibit 2-A)

- **Carbon Dioxide:** According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide in the earth's atmosphere are estimated to be approximately 370 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. (Urban Crossroads, 2018b, p. 16)



- Methane: Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Methane is also an asphyxiant and may displace oxygen in an enclosed space. (Urban Crossroads, 2018b, p. 16)
- Nitrous Oxide: Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage. (Urban Crossroads, 2018b, pp. 16-17)
- Fluorinated Gases: High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality. (Urban Crossroads, 2018b, p. 17)
- Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus, aerosols can cause elevated respiratory and cardiovascular diseases as well as increased mortality. (Urban Crossroads, 2018b, p. 17)

4.6.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations related to GHG emissions.

A. International Regulations

1. Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities." (UNFCCC, n.d.)

The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997 and entered into force on February 16, 2005. The detailed rules for the implementation of the Protocol were adopted at Conference of the Parties (COP) 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords." Its first commitment period started in 2008 and ended in 2012. (UNFCCC, n.d.)

On December 8, 2012, in Doha, Qatar, the "Doha Amendment to the Kyoto Protocol" was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from January 1, 2013 to December 31, 2020;
- A revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and



- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period. (UNFCCC, n.d.)

On December 21, 2012, the amendment was circulated by the Secretary-General of the United Nations, acting in his capacity as Depositary, to all Parties to the Kyoto Protocol in accordance with Articles 20 and 21 of the Protocol. (UNFCCC, n.d.)

During the first commitment period, 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of five percent against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first. (UNFCCC, n.d.)

2. The Paris Agreement

The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. (UNFCCC, n.d.)

The Paris Agreement’s central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. (UNFCCC, n.d.)

The Paris Agreement requires all Parties to put forward their best efforts through “nationally determined contributions” (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. (UNFCCC, n.d.)

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs. There will also be a global stock-taking every five years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties. (UNFCCC, n.d.)

The Paris Agreement entered into force on November 4, 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary. (UNFCCC, n.d.)



On June 1, 2017, President Donald Trump announced he would begin the process of withdrawing the United States from the Paris Agreement. In accordance with articles within the Paris Agreement, the earliest effective date for the United States' withdrawal from the Agreement is November 4, 2020.

B. Federal Regulations

1. Clean Air Act

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under § 202(a) of the Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them.

Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 [2007]); however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

C. State Regulations

1. Title 24 Building Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2016 Building Energy Efficiency Standards) became effective on January 1, 2017. The 2016 Building Energy Efficiency Standards are 28 percent more efficient than the previous (2013) Building Energy Efficiency Standards for residential construction and 5 percent more efficient than the previous Standards for non-residential construction. (The 2013 Building Energy Efficiency Standards already were 25 percent more efficient for residential construction and 30 percent more efficient for nonresidential construction than the 2008 Building Energy Efficiency Standards they replaced.)

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the



design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality.” The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

2. California Assembly Bill No. 1493 (AB 1493)

AB 1493 required CARB to adopt the nation’s first GHG emission standards for automobiles. On September 24, 2009, CARB adopted amendments to the “Pavley” regulations that reduce greenhouse gas (GHG) emissions in new passenger vehicles from model year 2009 through 2016. These amendments were part of California’s commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB’s September amendments cement California’s enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the EPA in March 2008. That decision was based on a finding that California’s request to reduce GHG emissions from passenger vehicles did not meet the CAA requirement of showing that the waiver was needed to meet “compelling and extraordinary conditions.” (CARB, 2017a)

CARB’s Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017a)

The regulations had been threatened by automaker lawsuits and were stalled by the EPA’s delay in reviewing and then initially denying California’s waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists’ costs. (CARB, 2017a)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (CARB, 2017a)

3. Executive Order S-3-05

Executive Order (EO) S-3-05 documents GHG emission reduction goals, creates the Climate Action Team and directs the Secretary of the California EPA to coordinate efforts with meeting the GHG reduction targets with



the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually to report: progress toward meeting the GHG goals; GHG impacts to California; and applicable Mitigation and Adaptation Plans. EO S-3-05 goals for GHG emissions reductions include: reducing GHG emissions to 2000 levels by the year 2010; reducing GHG emissions to 1990 levels by the year 2020; and reducing GHG emissions to 80 percent below 1990 levels by 2050. (CCC, n.d.)

4. California Assembly Bill 32 – Global Warming Solutions Act of 2006

In September 2006, Governor Schwarzenegger signed Assembly Bill 32 (AB 32), the California Climate Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, which represents a reduction of approximately 15 percent below emissions expected under a “business as usual” scenario. Pursuant to AB 32, the CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, cleaner transportation, and reducing waste. (CARB, 2014)

AB 32 specifically required that CARB do the following:

- Prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020, and update the Scoping Plan every five years.
- Maintain and continue reductions in emissions of GHG beyond 2020.
- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020.
- Identify and adopt regulations for discrete early actions that could be enforceable on or before January 1, 2010.
- Adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions.
- Convene an Environmental Justice Advisory Committee to advise the Board in developing and updating the Scoping Plan and any other pertinent matter in implementing AB 32.
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emission reduction measures. (CARB, 2014)

In November 2007, CARB completed its estimated calculations of Statewide 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons (MMTs) (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 million metric tons of carbon dioxide equivalent (MMTCO_{2e}) equivalent was established as the emissions limit for 2020. For comparison, CARB’s estimate for baseline GHG emissions was 473 MMTCO_{2e} for 2000 and without emissions reduction measures 2010 emissions were projected to be 532 MMTCO_{2e}. “Business as usual” conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 MMTCO_{2e}. (CARB, 2007)



AB 32 required CARB to develop a Scoping Plan which lays out California's strategy for meeting the goals. The Scoping Plan must be updated every five years. In December 2008, CARB approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. Table 4.6-3, *Scoping Plan GHG Reduction Measures Towards 2020 Target*, shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the Year 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMTCO_{2e}, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the State's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 MMTCO_{2e} (or approximately 1.2 percent of the GHG reduction target). (CARB, 2014)

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and regulations (referred to as "Business-As-Usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team (CAT) early actions and additional GHG reduction measures, identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.

When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%), the 2020 projection in the BAU condition was reduced further to 507 metric tons of carbon dioxide equivalent (MTCO_{2e}). As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 MTCO_{2e}, or approximately 16 percent (down from 28.5 percent), from the BAU condition.

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Update), which builds upon the initial Scoping Plan with new strategies and recommendations. The Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals, highlights the latest climate change science and provides direction on how to achieve long-term emission reduction goal described in Executive Order S-3-05. The Update recalculates 1990 GHG emissions using new global warming potentials identified in the IPCC Fourth Assessment Report released in 2007. Using those GWPs, the 427 MTCO_{2e} 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 MTCO_{2e}. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 MTCO_{2e} (down from 509 MTCO_{2e}), or approximately 15.3 percent (down from 28.5 percent), from the BAU condition. (CARB, 2014)

Table 4.6-3 Scoping Plan GHG Reduction Measures Towards 2020 Target

<i>Recommended Reduction Measures</i>	<i>Reductions Counted toward 2020 Target of 169 MMT CO₂e</i>	<i>Percentage of Statewide 2020 Target</i>
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets ¹	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined ²	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

Source: CARB. 2008, MMTons CO₂e: million metric tons of CO₂e

¹Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

²According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO₂e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

In November 2017, CARB released the final Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update would reflect the 2030 target of a 40 percent reduction below 1990 levels, set by Senate Bill (SB) 32. Key GHG emissions reductions programs that the draft Second Update proposes to build 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 MMTCO₂e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

5. *California Senate Bill No. 1368 (SB 1368)*

In 2006, the State Legislature adopted Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006), which directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed specified emissions criteria. Accordingly, SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand. (CEC, n.d.)

6. *Executive Order S-01-07*

Executive Order (EO) S-01-07 is effectively known as the Low Carbon Fuel Standard (LCFS). The Executive Order seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10 percent by 2020. The LCFS requires fuel providers in California to ensure that the mix of fuel they sell into the California market meet, on average, a declining standard for GHG emissions measured in CO₂e grams per unit of fuel energy sold. (CCC, n.d.)

7. *Senate Bill 1078*

Senate Bill (SB) 1078 establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. (CCC, n.d.)

8. *Senate Bill 107*

SB 107 directed California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010. (CCC, n.d.)

9. *Executive Order S-14-08*

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08, revising California's existing Renewable Portfolio Standard (RPS) upward to require all retail sellers of electricity to serve 33% of their load from renewable energy sources by 2020. In order to meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "RPS eligible" energy projects will be needed. Executive Order S-14-08 seeks to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities. To this end, S-14-08 issues two directives: (1) the existing Renewable Energy Transmission Initiative will identify renewable energy zones that can be developed as such with little environmental impact, and (2) the California Energy Commission (CEC) and the California



Department of Fish and Wildlife (CDFW) will collaborate to expedite the review, permitting, and licensing process for proposed RPS-eligible renewable energy projects.

10. Senate Bill 97

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze GHGs as a part of the CEQA process. SB 97 required the Governor's Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of greenhouse gas emissions. (OPR, n.d.) Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines § 15064.4.)
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines § 15126.4(c).)
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria. (See CEQA Guidelines § 15183.5(b).)
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.) (OPR, n.d.)

As part of the administrative rulemaking process, the Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. (OPR, n.d.)

Of note, the new guidelines state that a lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. Pursuant to CEQA Guidelines § 15064.4(a), "A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; or (2) Rely on a qualitative analysis or performance based standards."

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See CEQA Guidelines § 15130(f)).

§ 15064.4(b) of the guidelines provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions:



1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The CEQA Guideline amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a “good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.” The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies’ discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Specific GHG language incorporated in the Guidelines’ suggested Environmental Checklist (Guidelines Appendix G) is as follows:

VII. GREENHOUSE GAS EMISSIONS

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

11. Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities. (CARB, 2018)

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed. (CARB, 2018)



Each of California's MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate "alternative planning strategy" (APS) to meet the targets. The APS is not a part of the RTP. (CARB, 2018)

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers can get relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region's SCS (or APS) that meets the targets (see Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28.). (CARB, 2018)

12. Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15, which sets a goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The 2030 target serves as a benchmark goal on the way to achieving the GHG reductions goal set by former Governor Schwarzenegger via Executive Order S-3-05 (i.e., 80 percent below 1990 greenhouse gas emissions levels by 2050). (CCC, n.d.)

13. Senate Bill 32

On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050. Pursuant to guidance from the Association of Environmental Professionals (AEP), GHG emissions "...should be identified for the project horizon year and lead agencies should consider the project horizon year when applying a threshold of significance" (AEP, 2016, p. 32). Thus, projects with a horizon year beyond 2020 would be subject to the GHG reduction targets set forth by SB 32.

14. Newhall Ranch Decision

In its decision, *Center for Biological Diversity v. Department of Fish and Wildlife*, S217763 (Newhall), the California Supreme Court ("Court") evaluated the CDFW analysis of potential GHG emissions as contained in the EIR for the proposed land development called Newhall Ranch. In the EIR, the CDFW analyzed GHG emissions under AB 32, using the business-as-usual (BAU) comparison as its sole significance determination criteria.

In Newhall, the California Supreme Court concluded that a finding of consistency with meeting statewide emission reduction goals is a legally permissible criterion of significance when analyzing potential impacts of GHG emissions under CEQA. However, the Court found that the EIR's conclusion that the project's emissions



would be less than significant under that criterion was not supported by substantial evidence, and remanded back to the appellate court the narrow issue of whether substantial evidence supported the application of AB 32 statewide GHG reduction goal of approximately 28.5% to new land use projects.

The Court then identified “potential options” for lead agencies evaluating cumulative significance of a proposed land use development’s GHG emissions in future CEQA documents:

1. **BAU Model:** While the Court cautioned that the Scoping Plan may not be appropriate at the project-level, the BAU model might be used to determine what level of reduction from BAU a new land use development at the proposed location must contribute in order to comply with statewide goals pursuant to AB 32.
2. **Compliance With Regulatory Programs Designed To Reduce Greenhouse Gas Emissions:** The Court suggests that a lead agency could rely on a showing of compliance with regulatory programs designed to reduce GHG emissions. The Court clarifies that a significance analysis based on compliance with such statewide regulations only goes to impact within the area governed by the regulations.
3. **Local Climate Action Plan Or Other “Geographically Specific Greenhouse Gas Emission Reduction Plans”:** The Court points out that these plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, so long as the plan is “sufficiently detailed and adequately supported.”
4. **Regional SCS:** The Court also articulates that a lead agency need not additionally analyze greenhouse gas emissions from cars and light trucks in CEQA documents for certain residential, mixed use, and transit priority projects that are consistent with an applicable SCS adopted pursuant to SB 375.
5. **Numerical GHG Significance Thresholds:** Although noting that use of such thresholds are not required, the Court favorably cited to the BAAQMD GHG significance thresholds, which are based on compliance with AB 32, and use a “Service Population” GHG ratio threshold for land use projects and a 10,000 ton annual GHG emission threshold for industrial projects. The Court remanded for further consideration the application of the 28.5% overall Scoping Plan metric, which is used by several Air Districts and, like the favorably-cited BAAQMD metric, is based on AB 32.
6. **Executive Order Nos. S-3-05 and B-30-15:** Citing to Executive Order Nos. S-3-05 and B- 30-15, the Court cautioned that those EIRs taking a goal-consistency approach to CEQA significance may in the future need to consider the project’s effects on meeting emissions reduction targets beyond 2020.

D. Local Regulations

1. City of Lake Elsinore Climate Action Plan (CAP)

The Climate Action Plan (CAP), which was adopted by the City Council on December 13, 2011, is the City of Lake Elsinore’s long-range plan to reduce local greenhouse gas emissions that contribute to climate change. The CAP identifies the activities in Lake Elsinore that generate GHGs, quantifies these emissions, and projects their future trends. It also describes local greenhouse gas emissions targets for the years 2020 and 2030,



consistent with the State of California's emissions reduction targets that were in effect at the time the CAP was adopted in 2011, and includes strategies and measures to meet these targets. Implementation of the CAP is intended to guide Lake Elsinore's actions to reduce its contribution to climate change and to support the State of California's emissions reduction targets. The CAP is also intended to support tiering and streamlining of future projects within Lake Elsinore pursuant to CEQA Guidelines §§ 15152 and 15183.5. Individual development projects such as the proposed Project are required to demonstrate consistency with applicable measures from the CAP. Implementation of the City's CAP would result in a City-wide reduction of GHGs by 33% below 1990 Business as Usual (BAU) conditions by 2030. (Lake Elsinore, 2011)

4.6.3 **BASIS FOR DETERMINING SIGNIFICANCE**

In order to assess the significance of a proposed Project's environmental impacts it is necessary to identify quantitative or qualitative thresholds which, if exceeded, would constitute a finding of significance. While estimated Project-related GHG emissions can be quantified, the direct impacts of such emissions on GCC and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the proposed Project would directly or indirectly affect the global climate.

AB 32 states, in part, that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, the proposed Project would have no potential to result in a direct impact to global warming; rather, Project-related contributions to GCC, if any, only have potential significance on a cumulative basis. Therefore, the analysis below focuses on the Project's potential to contribute to GCC in a cumulatively considerable way.

Section VIII of Appendix G to the CEQA Guidelines indicate that a project would result in a significant impact on climate change if a project were to:

- a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*
- b. *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The above-listed thresholds are derived directly from Section VIII of Appendix G to the CEQA Guidelines and the Project's Initial Study (*Technical Appendix A*), and address typical adverse effects associated with greenhouse gas emissions. (OPR, 2018)

Because AB 32 and SB 32 are the primary plans, policies and/or regulations adopted in the State of California to reduce GHG emissions, the proposed Project would have a cumulatively considerable impact on GCC if the Project would impede compliance with the GHG emissions reduction mandate established by AB 32 or SB 32.



AB 32 requires that statewide GHG emissions be reduced to Year 1990 levels by the Year 2020 (pursuant to the CARB Scoping Plan, the AB 32 Year 2020 emissions goal could be achieved by a 15-percent reduction in GHG emissions below 2008 emissions levels). To comply with AB 32 on a City-wide basis, the City of Lake Elsinore adopted a Climate Action Plan (CAP) in December 2011. Projects that are determined consistent with the Lake Elsinore CAP also are considered to be consistent with the GHG reduction targets of AB 32.

SB 32 requires that statewide GHG emissions be reduced to 40% below 1990 levels by 2030. The City of Lake Elsinore CAP establishes a target to achieve 33% below 1990 levels by 2030. Thus, in order to demonstrate compliance with the reduction targets established by SB 32, projects must demonstrate compliance with the CAP and that additional GHG reductions will be met beyond compliance with the CAP.

The analysis under Threshold a. is based on a quantitative analysis of the Project's compliance with the City of Lake Elsinore's CAP and the SB 32 target to reduce emissions to 40% below 1990 levels by 2040, and the analysis under Threshold b. is based on a qualitative analysis of the Project's consistency with the City of Lake Elsinore CAP, CARB's Scoping Plan, and with GHG emission-reducing regulations.

4.6.4 METHODOLOGY FOR ESTIMATING 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 (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 (VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod™ has been used for this Project to determine greenhouse gas emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1 and 3.2 of the Project's GHGA (*Technical Appendix E*). The CalEEMod model includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water. (Urban Crossroads, 2018b, p. 40)

A full life-cycle analysis (LCA) for construction and operational activity is not included in the 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. Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood or documented, and would be challenging to mitigate. Additionally, the science to calculate life cycle emissions is not yet established or well defined, therefore SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis. (Urban Crossroads, 2018b, p. 40)



A. Establishment of Significance Thresholds

The Lake Elsinore CAP was adopted to ensure that the City of Lake Elsinore achieves the GHG reduction targets established by AB 32 to reduce GHG emissions to 1990 levels by 2020. As such, projects that are consistent with the City's CAP do not require quantification of project-specific GHG emissions and, consistent with CEQA Guidelines, such projects are considered to be consistent with the GHG reduction targets established by AB 32. (Lake Elsinore, 2011)

The Lake Elsinore CAP also establishes a target to reduce GHG emissions by 33% below 1990 levels by 2030. However, SB 32, which was enacted subsequent to adoption of the City's CAP, sets a statewide reduction target for GHG emissions of 40% below 1990 levels by 2030. Thus, projects that are consistent with the CAP are not necessarily consistent with the GHG reduction targets established by SB 32. Rather, additional analysis and, if necessary, mitigation is required in order to demonstrate compliance with SB 32. Specifically, projects that are consistent with the CAP and that incorporate mitigation measures that go beyond the measures identified by the CAP can be found consistent with SB 32 if the additional mitigation achieves the additional 7% reductions needed to achieve the GHG reduction target of 40% below 1990 levels by 2030 on an individual project basis.

B. Methodology for Calculating Project-Related Construction Emissions

Construction activities associated with the proposed Project would result in emissions of CO₂ and CH₄ from construction activities. The Project's Air Quality Impact Analysis ("AQIA," *Technical Appendix B*) contains detailed information regarding construction activity. For construction-phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total greenhouse gas emissions for the construction activities, dividing it by a 30- year project life then adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. (Urban Crossroads, 2018b, p. 41)

C. Methodology for Calculating Project-Related Operational Emissions

Operational activities associated with the proposed Project would result in emissions of CO₂, CH₄, and N₂O from the following primary sources: Area Source Emissions; Energy Source Emissions; Mobile Source Emissions; Solid Waste; and Water Supply, Treatment and Distribution (Urban Crossroads, 2018b, p. 41). Each is discussed below.

1. Area Source Emissions

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. CalEEMod default parameters were used to estimate emissions associated with landscape maintenance equipment for the Project scenario. (Urban Crossroads, 2018b, p. 41)



Hearths/Fireplaces

GHG emissions would result from the combustion of wood or biomass and are considered biogenic emissions of CO₂. 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. (Urban Crossroads, 2018b, p. 41)

2. 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 CO₂ and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. It should be noted that the building energy use emissions do not include street lighting.² GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod default parameters were used. (Urban Crossroads, 2018b, p. 42)

3. Mobile Source Emissions

Project mobile source greenhouse gas emissions are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project-related operational air quality impacts are derived primarily from vehicle trips generated by the Project. Trip characteristics available from the Project's Traffic Impact Analysis (EIR *Technical Appendix L*) were utilized in the analysis. (Urban Crossroads, 2018b, p. 42)

Per the Project's TIA, the Project is expected to generate a net total of approximately 6,901 trip-ends per day (actual vehicles) on a typical weekday with 734 AM peak hour trips and 622 PM peak hour trips. It should be noted that weekday and Saturday trip characteristics are based on CalEEMod defaults. The Project's GHGA relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck emissions associated with the Project. (Urban Crossroads, 2018b, p. 42)

4. Solid Waste Emissions

Residential and commercial land uses would result in the generation and disposal of solid waste. A large percentage of this waste would be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material.

² The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.



CalEEMod default parameters were used to estimate GHG emissions associated with the disposal of solid waste for the Project scenario. (Urban Crossroads, 2018b, p. 42)

5. 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. (Urban Crossroads, 2018b, pp. 42-43)

4.6.5 IMPACT ANALYSIS

Threshold a.: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

In order to determine whether the Project's GHG emissions would have a potentially significant impact on the environment, the analysis herein evaluates whether the Project's emissions would be consistent with the GHG reduction targets established by AB 32 and SB 32. Per recommendations from the SCAQMD, a screening threshold also is utilized to evaluate whether the Project's GHG emissions would have the potential to be cumulatively considerable.

SCAQMD Screening Threshold

The City of Lake Elsinore has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A screening threshold of 3,000 MTCO₂e per year to determine if additional analysis is required is an acceptable approach for small projects. This approach is a widely accepted screening threshold used by various jurisdictions in the South Coast Air Basin (SCAB) and is based on the SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required. (Urban Crossroads, 2018b, p. 43)

As shown on Table 4.6-4, *Total Project Greenhouse Gas Emissions (Annual)*, the proposed Project would result in approximately 4,021.78 MTCO₂e per year from construction, area, energy, waste, and water usage. In addition, the proposed Project has the potential to result in an additional 9,136.27 MTCO₂e per year from mobile sources. As such, the proposed Project has the potential to generate a total of approximately 13,158.05 MTCO₂e per year and would therefore exceed the SCAQMD's numeric threshold of 3,000 MTCO₂e if it were applied. It should be noted however that the 3,000 MTCO₂e threshold is a screening threshold used to determine if additional analysis is required. Because the Project would exceed the screening threshold, additional analysis is required to determine whether the Project's GHG emissions would comply with the GHG reduction targets established by AB 32 and SB 32 and to determine whether the Project's GHG emissions would have the potential to significantly impact the environment. (Urban Crossroads, 2018b, p. 43)



Project Consistency with AB 32 Reduction Targets

As discussed in the Newall Ranch decision (as discussed in subsection 4.6.2.C), a lead agency may assess the significance of GHG emissions by determining a project's consistency with a local GHG reduction plan or CAP that qualifies under Section 15183.5 of the CEQA Guidelines. The City of Lake Elsinore's CAP serves to fulfill this role and is designed to ensure that the development accommodated by the buildout of the General Plan supports the goals of AB 32, while also identifying GHG reductions anticipated for 2030. CARB adopted the State's strategy for achieving AB 32 targets in its Climate Change Scoping Plan (Scoping Plan) in 2008. The Scoping Plan GHG reduction goal is to reduce statewide emissions to 1990 levels by 2020. The Lake Elsinore CAP includes strategies that will achieve this target in the City of Lake Elsinore. The CAP target is to reduce City-wide emissions by the amount recommended in the Scoping Plan for local governments. Specifically, the CAP identifies an efficiency-based target, which is a measure of the amount of GHG emissions associated with a given development divided by the service population (SP), which is defined as the City's total number of employees and residents. The CAP identifies an efficiency-based target to reduce community-wide emissions to 6.6 MT CO₂e per SP, which, if achieved, would meet the GHG reduction targets established by AB 32 and Executive Order S-3-05. (Lake Elsinore, 2011, p. 4-1)

Table 4.6-4 Total Project Greenhouse Gas Emissions (Annual)

Emission Source	Emissions (metric tons per year) CO₂e
Annual construction-related emissions amortized over 30 years	128.92
Area	43.49
Energy	3,303.58
Mobile Sources	9,136.27
Waste	303.36
Water Usage	242.44
Proposed Project Total Emissions	13,158.05

(Urban Crossroads, 2018b, Table 3-1)

Table 4.6-5, *Project Consistency with City of Lake Elsinore CAP*, provides an analysis of the Project's consistency with the Lake Elsinore CAP. As shown, the proposed Project would be consistent with or otherwise would not conflict with most of the applicable CAP reduction measures. However, in the absence of mitigation, it cannot be assured that all applicable CAP measures would be implemented by the Project. Because the City's CAP was adopted to reduce City-wide GHG emission levels to 1990 levels by 2020, consistent with AB 32, and because the Project would conflict with applicable CAP measures in the absence of mitigation, the Project's GHG emissions would have the potential to conflict with the reduction targets established by AB 32. This represents a significant impact for which mitigation would be required.



Table 4.6-5 Project Consistency with City of Lake Elsinore CAP

CAP Measure	Applicability to Proposed Project	Remarks
Measure T-1.2: Pedestrian Infrastructure	Applicable	This measure requires the installation of sidewalks along new and reconstructed streets and sidewalks or paths to internally link all uses and provide connections to neighborhood activity centers, major destinations, and transit facilities contiguous with the project site. As required by the Project's Tentative Map (TM 37305) and the Nichols Ranch Specific Plan (NRSP), the Project would be required to provide sidewalks along Nichols Road, El Toro Road/Wood Mesa Court, and all internal streets. As part of its future review of design review and building permit applications, the Department of Public Works and Building Department would review plans to ensure sidewalks are accommodated in conformance with TM 37305, and also would review plans to ensure that the landscaped greenbelts required by the proposed NRSP are incorporated along "A" Street and "B" Street. As such, the proposed Project would not conflict with this measure.
Measure T-1.4: Bicycle Infrastructure	Applicable	This measure requires new development to implement and connect to the network of Class I, II and III bikeways, trails and safety features identified in the General Plan, Bike Lane Master Plan, Trails Master Plan and Western Riverside County Non-Motorized Transportation Plan. Consistent with the City's General Plan and the proposed NRSP a Class II bicycle lane is accommodated by TM 37305 and the proposed NRSP along Nichols Road. As part of its future review of future improvement plans for Nichols Road, the City would review plans to ensure that the Class II bicycle lane is accommodated. As such, the proposed Project would not conflict with this measure.
Measure T-1.5: Bicycle Parking Standards	Applicable	This measure requires the City to enforce short-term and long-term bicycle parking standards for new non-residential developments. The provision of bicycle parking for non-residential development is a requirement of the Green Building Code (Section 5.106.4), which, consistent with the CAP measures, requires short-term parking for bicycles equal to 5 percent of required vehicle parking spaces, and requires new buildings with 10 or more tenant occupants to accommodate secure bicycle parking equal to 5 percent of the required vehicular parking spaces. Compliance with the Green Building Standards Code is mandatory and would be enforced as part of the City's future review of Commercial Design Review and building permit applications for proposed commercial uses on site. As such, the proposed Project would not conflict with this measure.



CAP Measure	Applicability to Proposed Project	Remarks
Measure T-2.1: Designated Parking for Fuel Efficient Vehicles	Applicable	This measure requires new non- residential developments to designate 10% of total parking spaces for low-emitting, fuel-efficient vehicles. The provision of preferred parking for fuel efficient vehicles is a requirement of the 2016 California Green Building Code (Section 5.106.5.2); however, the Green Building Standards Code only requires preferred parking for fuel efficient vehicles at a rate of 8% of the total required parking spaces. Thus, in the absence of mitigation, the Project has the potential to conflict with Measure T-2.1. This represents a potentially significant impact prior to mitigation.
Measure T-4.1: Commute Trip Reduction Program	Applicable	This measure requires the City to institute a commute trip reduction program for employers with fewer than 100 employees. Although Chapter 10.68 (Transportation Demand Management) of the City's Municipal Code was adopted to promote reduction in commute trips, Chapter 10.68 applies only to developments with more than 100 employees. Thus, in the absence of mitigation, the Project has the potential to conflict with Measure T-4.1.
Measure E-1.1: Tree Planting Requirements	Applicable	This measure requires new developments to plant at minimum one 15-gallon non-deciduous, umbrella-form tree per 30 linear feet of boundary length near buildings. Municipal Code Section 17.124.080 implements this requirement for general commercial land uses. Compliance with Municipal Code requirements would be assured through future City review of Commercial Design Review and building permit applications. As such, the proposed Project would not conflict with this measure.
Measure E-1.2: Cool Roof Requirements	Applicable	This measure requires new non- residential development to use roofing materials having solar reflectance, thermal emittance or Solar Reflectance Index consistent with CalGreen Tier 1 values. The provision of cool roofs is a requirement of the California Green Building Code (Section A5.106.11). Compliance with the Green Building Standards Code is mandatory and would be enforced as part of the City's future review of Commercial Design Review and building permits applications for proposed commercial uses on site. As such, the proposed Project would not conflict with this measure.
Measure E-1.3: Energy Efficient Building Standards	Applicable	This measure requires that new construction exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards by 15% by 2020, through either the performance based or prescriptive approach described in the California Green Building Code. In the absence of mitigation, it cannot be assured that the Project would achieve the required reduction. Thus, in the absence of mitigation, the Project has the potential to conflict with Measure E-1.3.



CAP Measure	Applicability to Proposed Project	Remarks
Measure E-3.2: Energy Efficient Street and Traffic Signal Lights	Applicable	This measure requires the City to work with Southern California Edison to replace existing high-pressure sodium street lights and traffic lights with high efficiency alternatives, such as Low Emitting Diode (LED) lights; replace existing City owned traffic lights with LED lights; require any new street and traffic lights to be LED. This requirement applies to the Project's proposed construction of a new traffic signal at the intersection of "A" Street and Nichols Road. As part of the City's future review of improvement plans involving a traffic signal, the City would ensure that the traffic signal is proposed with LED lights. As such, the proposed Project would not conflict with this measure.
Measure E-4.1: Landscaping Ordinance	Applicable	This measure requires the City to enforce the City's AB 1881 Landscaping Ordinance, which requires that landscaping be water efficient, thereby consuming less energy and reducing emissions. The NRSP includes a community plant palette that emphasizes water efficient species. Additionally, the City would review future design review and building permit applications for compliance with Lake Elsinore Municipal Code Chapter 19.08 (Water Efficient Landscape Requirements), which is the City's AB 1881 Landscaping Ordinance. As such, the proposed Project would not conflict with this measure.
Measure E-4.2: Indoor Water Conservation Requirements	Applicable	This measure requires that development projects reduce indoor water consumption by 30% by 2020. Indoor water conservation is a requirement of Division 5.3 (Water Efficiency and Conservation) of the 2016 California Green Building Code, which is implemented through the City's Municipal Code. Compliance with the requirement to reduce indoor water consumption would be enforced as part of future City review of building permit applications. Thus, the proposed Project would not conflict with this measure.
Measure E-5.1: Renewable Energy Incentives	Applicable	This measure facilitates the voluntary installation of small-scale renewable energy systems, such as solar photovoltaic and solar hot water systems, by connecting residents and businesses with technical and financial assistance through the City website. This measure would be implemented by the City, and future Project residents would receive information regarding installation of small-scale renewable energy systems, including solar. No elements of the proposed Project would conflict with this measure.
Measure S-1.4: Construction and Demolition Waste Diversion	Applicable	This measure requires development projects to divert, recycle or salvage at least 65% of nonhazardous construction and demolition debris generated at the site by 2020 and requires all construction and demolition projects to be accompanied by a waste management plan for the project. Pursuant to Lake Elsinore Municipal Code Title 14, Chapter 14.12 (Construction and Demolition Waste Management), the Project Applicant



CAP Measure	Applicability to Proposed Project	Remarks
		would be required to prepare a Waste Recycling Plan to demonstrate how construction and demolition waste would be diverted from local landfills. However, Chapter 14.12 requires a diversion rate of only 50%. Thus, the Project would have the potential to conflict with this measure in the absence of mitigation.

(Urban Crossroads, 2018b, Table 3-4)

Project Consistency with SB 32 Reduction Targets

Senate Bill 32 (SB 32) establishes a statewide GHG reduction target to achieve emission levels that are 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050. (Urban Crossroads, 2018b, p. 53)

The City of Lake Elsinore CAP was developed prior to the passage of SB 32. The CAP identifies a GHG reduction target of 6.6 MTCO_{2e} per SP by 2020, and a reduction target of 4.4 MTCO_{2e} per SP by 2030. These reduction targets would achieve 1990 GHG emission levels in the City of Lake Elsinore by 2020 and would result in GHG emissions that are approximately 33% below 1990 levels by 2030. In consideration of the fact that 6.6 MTCO_{2e} per SP represents the City's 1990 emission level target, then in order to meet the SB 32 target to reduce emissions to 40% below 1990 levels by 2030 the City would be required to achieve a service-population ratio of 3.96 MTCO_{2e} per SP (6.6 MTCO_{2e} per SP x 60% = 3.96 MTCO_{2e}/SP). Therefore, although the Project would be consistent with or otherwise would not conflict with the City's CAP after the incorporation of mitigation, compliance with the CAP is not sufficient to demonstrate consistency at the Project level with the reduction targets of SB 32 to achieve 40% below 1990 levels by 2030.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, 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 percent 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 percent reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050. (Urban Crossroads, 2018b, pp. 53-54)



Implementation of the Project would not actively interfere with any future City-mandated, state-mandated, or federally-mandated retrofit obligations enacted or promulgated to legally require development projects City-wide, state-wide, or nation-wide to assist in meeting state-adopted greenhouse gas emissions reduction targets, including that established under Executive Order S-3-05, Executive Order B-30-15, or SB 32. For example, California has set a goal to obtain 100 percent of its electric power from zero-emission sources by 2045, and future commercial and residential uses proposed by the Project would be served by energy purveyors that will be required to increasingly rely on zero-emission sources. Additionally, vehicular traffic associated with the Project would be subject to increasingly stringent standards for fuel efficiency and emissions. Thus, the Project would be subject to future City-mandated, state-mandated, or federally-mandated standards for existing development and would not conflict with any such future requirements. (Urban Crossroads, 2018b, p. 54)

The Project does not interfere with the state's implementation of (i) Executive Order B-30-15 and SB 32's target of reducing statewide GHG emissions to 40% below 1990 levels by 2030 or (ii) Executive Order S-3-05's target of reducing statewide GHG emissions to 80% below 1990 levels by 2050 because it does not interfere with the state's implementation of GHG reduction plans described in the CARB's Updated Scoping Plan, including the state providing for 12,000 MW of renewable distributed generation by 2020, the California Building Commission mandating net zero energy homes in the building code after 2020, or existing building retrofits under AB 758. Construction of the Project would be mandated by state law to comply with all applicable regulations in effect at that time. (Urban Crossroads, 2018b, p. 54)

Notwithstanding, because compliance with the City's CAP would only achieve a reduction of 33% in GHG emissions below 1990 levels by 2030, the Project's GHG emissions considered in isolation would not achieve the reduction targets established by SB 32 in the absence of mitigation. Thus, the Project's GHG emissions would be cumulatively considerable prior to mitigation and therefore may have a significant impact on the environment.

Threshold b.: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Applicable plans, policies, or regulations that are in effect in the Project area include the City of Lake Elsinore CAP, AB 32, the CARB Scoping Plan, and SB 32.

Project Consistency with the City of Lake Elsinore CAP

As indicated under the analysis of Threshold a., and as previously summarized in Table 4.6-5, the Project would be consistent with, or otherwise would not conflict with, most of the applicable measures from the City of Lake Elsinore CAP. However, several of the measures identified in the City's CAP are not currently requirements of the City's Municipal Code and/or the 2016 California Green Building Standards Code. Thus, in the absence of mitigation, the Project would result in a significant impact due to a conflict with the City's CAP.



Project Consistency with AB 32 and CARB's Scoping Plan

CARB's Scoping Plan identifies strategies to reduce California's greenhouse gas emissions in support of AB 32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Project, such as energy efficiency. Finally, while some measures are not directly applicable, the Project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows: (Urban Crossroads, 2018b, pp. 51-52)

1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix statewide.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went



into effect in 2010. Future, yet to be determined improvements, includes hybridization of MD and HD trucks.

11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. High Speed Rail. Support implementation of a high-speed rail system.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO₂e/yr.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 4.6-6, *Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Measures*, summarizes the Project's consistency with the State Scoping Plan. As summarized, the Project would not conflict with any of the provisions of the Scoping Plan and in fact supports the action categories: energy efficiency, water conservation, recycling, and landscaping.

Project Consistency with SB 32

As indicated under the discussion of Threshold a., SB 32 requires the state to reduce statewide greenhouse gas emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050. (Urban Crossroads, 2018b, p. 53) Although the Project would be consistent with the Lake Elsinore CAP following implementation of the mitigation measures identified herein, compliance with the CAP would only demonstrate that the Project would achieve a reduction in GHGs that is equal to approximately 33% below

Table 4.6-6 Project Consistency with Scoping Plan Greenhouse Gas Emission Reduction Measures

Number	Scoping Plan Measure	Remarks
T-1	Pavley Motor Vehicle Standards (AB 1493)	Future vehicles associated with Project residents and businesses on site would include vehicles in compliance with incumbent CARB vehicle standards
H-4	Limit High GWP Use in Consumer Products	Residents and future business on site would use consumer products that would comply with the incumbent regulations
H-1	Motor Vehicle Air Conditioning Systems – Reduction from Non-Professional Servicing	Residents and future business on site would be prohibited from performing air conditioning repairs and required to use professional servicing.
T-4	Tire Pressure Program	Proper tire pressure for motor vehicles associated with future residential and commercial uses on site would be maintained when vehicles are serviced.
T-2	Low Carbon Fuel Standard	Motor vehicles associated with future residents and businesses would use fuels that are compliant with incumbent standards.
W-1	Water Use Efficiency	Development proposals within the Project site would implement measures to minimize water use and maximize efficiency. The Project will be required to show consistency with the City of Lake Elsinore's municipal code requiring efficient landscape requirements (Chapter 19.08 of the City's municipal code / consistency with the City's AB 1881 Landscaping Ordinance).
GB-1	Green Buildings	Development proposals within the Project site would be constructed in compliance with incumbent state or local green building standards.
H-5	Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	Motor vehicles driven by residents, employees, and customers would comply with the leak test requirements during smog checks.
E-1	Energy Efficiency Measures (Electricity)	The Project would comply with incumbent electrical energy efficiency standards. At this time, the Project would be required to comply with the 2016 Title 24 standards and applicable green building standards.
CR-1	Energy Efficiency (Natural Gas)	Development proposals within the Project site would comply with incumbent natural gas energy efficiency standards. At this time, the Project would be required to comply with the 2016 Title 24 standards and applicable green building standards.
GB-1	Greening New Residential and Commercial Construction	Development proposals within the Project site would comply with incumbent green building standards. At this time, the Project would be required to comply with the 2016 Title 24 standards and applicable green building standards.
GB-1	Greening Existing Homes and Commercial Buildings	Development proposals within the Project site would meet retrofit standards as they become effective.

(Urban Crossroads, 2018b, Table 3-5)

1990 levels by 2030; therefore, it cannot be demonstrated that the Project would achieve the target to reduce emissions to 40% below 1990 levels by 2030. Accordingly, prior to mitigation, the Project is potentially



inconsistent with the GHG reduction targets established by SB 32 and this is considered a cumulatively-considerable impact of the proposed Project.

4.6.6 CUMULATIVE IMPACT ANALYSIS

GCC occurs as the result of global emissions of GHGs. An individual project such as the proposed Project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines § 15130[f]).

Accordingly, the Project-specific impact analysis provided within this Subsection reflects a cumulative impact analysis of the Project's GHG emissions and concludes that because the proposed Project would produce total annual GHG emissions (13,158.05 MTCO₂e per year) at Buildout Year (2024) that would exceed the SCAQMD screening threshold of 3,000 MTCO₂e. In the absence of mitigation, the Project would have the potential to conflict with the City of Lake Elsinore CAP, which is intended to meet the GHG reduction targets established by AB 32; thus, prior to mitigation, the Project would conflict with AB 32. Additionally, prior to mitigation, the Project would result in a cumulatively-considerable impact due to a conflict with the GHG reduction targets established by SB 32. Thus, the Project's GHG emission impacts would be cumulatively considerable prior to mitigation.

4.6.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a.: Cumulatively-Considerable Impact. As shown in Table 4.6-4 the proposed Project would result in approximately 13,158.05 MTCO₂e per year from construction, area, mobile, energy, waste, and water usage. This level of emissions exceeds the screening threshold established by the SCAQMD for non-industrial projects (3,000 MTCO₂e). Although the proposed Project would comply with most of the applicable provisions of the Lake Elsinore CAP, which was prepared to achieve the AB 32 GHG reduction target to achieve 1990 emission levels by 2020, in the absence of mitigation it cannot be assured that the Project would implement certain applicable measures from the CAP that are not already a requirement of the City's Municipal Code and/or the 2016 Green Building Standards Code. Additionally, the CAP does not adequately address the GHG reduction target established by SB 32 to reduce emission levels to 40% below 1990 levels by 2030. As such, prior to mitigation the Project would result in a cumulatively-considerable impact due to GHG emissions that may have a significant impact on the environment.

Threshold b.: Cumulatively-Considerable Impact. In the absence of mitigation, the Project would have the potential to conflict with the Lake Elsinore CAP, which was prepared to ensure compliance City-wide with the GHG reduction targets established by AB 32. Thus, prior to mitigation, the Project has the potential to conflict with the City's CAP. Additionally, it cannot be demonstrated that the Project would achieve the GHG reduction target specified by SB 32 to reduce GHG emissions to 40% below 1990 levels by 2030. Rather, compliance with the CAP would only result in City-wide reductions of approximately 33% below 1990 levels. As such, the Project's potential to conflict with SB 32 represents a cumulatively-considerable impact prior to



mitigation. However, the Project would be consistent with or otherwise would not conflict with the CARB Scoping Plan (refer to 0).

4.6.8 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

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

The Project would be required to comply with all mandates imposed by the State of California and the South Coast Air Quality Management District aimed at the reduction of air quality emissions. Those that are applicable to the Project and that would assist in the reduction of greenhouse gas emissions are listed below. (Urban Crossroads, 2018b, pp. 3, 6)

- Global Warming Solutions Act of 2006 (AB32)
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375)
- Pavley Fuel Efficiency Standards (AB1493). Establishes fuel efficiency ratings for new vehicles.
- Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction.
- Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances.
- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10% less by 2020.
- California Water Conservation in Landscaping Act of 2006 (AB1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes.
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions.
- Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020.

Promulgated regulations that would affect the Project's emissions are accounted for in the Project's GHG calculations (refer to Table 4.6-4). In particular, the Pavley Standards, Low Carbon Fuel Standards, and Renewable Portfolio Standards (RPS) would be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations. (Urban Crossroads, 2018b, p. 6)

Additionally, the Project accommodates the following design features and/or regulatory requirements that would serve to reduce the Project's GHG emission:



- The Project complies with all applicable provisions of the City of Lake Elsinore Climate Action Plan (December 13, 2011), including applicable requirements identified in Table 4.6-5.
- The Project is designed to provide pedestrian connections along selected roads and trails within the development to provide access to the various uses and activity centers within the Project. Facilitating pedestrian access encourages people to walk instead of drive. The Project would not impose barriers to pedestrian access and interconnectivity.
- The Project is designed to accommodate a mix of uses (i.e., residential, commercial, and recreational land uses) which would serve to reduce travel distances and regional vehicle miles traveled (VMT) by consolidating trips and reducing requirements for multiple trips. The Project would minimize the need for external trips by including services/facilities for uses such as day care, banking/ATM, restaurants, vehicle refueling, health care, personal services (e.g., salons, dry cleaning, etc.) and/or shopping uses.
- The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development.
- The Project is required to comply with applicable provisions of the 2016 California Green Building Standards Code (or any updated code that may be in existence at the time of issuance of building permits), as implemented by the City's Municipal Code. These requirements include, but are not limited to, the following:
 - Prior to issuance of occupancy permits, the City of Lake Elsinore shall ensure that commercial uses on site accommodate the required number of Electric Vehicle (EV) charging stations as required by the 2016 Green Building Standards Code Section 5.106.5.3 (Electric vehicle (EV) charging).
 - Prior to issuance of grading, demolition, or building permits, the Project Applicant shall prepare, and the City of Lake Elsinore shall review and approve, a Construction Waste Management Plan, in conformance with the 2016 Green Building Standards Code Section 5.408 (Construction Waste Reduction, Disposal and Recycling). The Construction Waste Management Plan shall demonstrate that a minimum of 65 percent of the nonhazardous construction and demolition waste will be recycled and/or salvaged, except as otherwise allowed by Section 5.408.

Mitigation

- MM 4.6-1 Prior to the issuance of building permits, the City of Lake Elsinore shall review the building plans to ensure that the following requirements have been or will be met:
- The Project Applicant shall provide evidence that the buildings have been designed to achieve efficiency exceeding current 2016 California Building Code Title 24 requirements by at least 15 percent for both residential and non-residential uses.



- All primary use buildings and structures shall be designed to accommodate photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future tenant/purchasers of the existence of this infrastructure.
- To reduce water demands and associated energy use, a Water Conservation Strategy shall be implemented that demonstrates a minimum 20% reduction in outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Future building permit applications shall incorporate the following:
 - The landscaping palette shall emphasize drought-tolerant plants consistent with provisions of the City of Lake Elsinore requirements;
 - Irrigation plans shall demonstrate use of water-efficient irrigation techniques consistent with City of Lake Elsinore requirements.
- Project building plans shall incorporate the following:
 - U.S. EPA Certified WaterSense labeled or equivalent faucets, high-efficiency toilets HETs), and water-conserving shower heads.
 - All appliances shall be energy star appliances (refrigerator, dish washer, and washing machine).

MM 4.6-2 Prior to the issuance of building permits, the City of Lake Elsinore shall review Project building plans to ensure that all outdoor lighting consists of solar or light-emitting diodes (LEDs), where feasible. Use of any other type of lighting, if required for operational or safety reasons, shall be minimized to the extent feasible.

MM 4.6-3 Prior to issuance of occupancy permits for any proposed commercial uses on site, the City of Lake Elsinore shall ensure that at least 10% of the required parking spaces are reserved for fuel-efficient vehicles (i.e., vehicles bearing Clean Air Vehicle stickers from expired High Occupancy Vehicle lane programs).

MM 4.6-4 Prior to the issuance of occupancy permits for any proposed commercial uses on site, the Project Applicant shall prepare a Commute Trip Reduction Program that requires 20% of employees to be offered telecommuting or other trip reduction techniques, consistent with Measure T-4.1 of the Lake Elsinore Climate Action Plan (CAP). The Commute Trip Reduction Program also shall require future tenants to provide information, training, and incentives to future employees to encourage participation.



4.6.9 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a.: Less-than-Cumulatively Considerable Impact with Mitigation. Implementation of Mitigation Measures MM 4.6-2 through MM 4.6-4 and compliance with applicable regulatory requirements and Project design features as identified above in subsection 4.6.8 would ensure that the proposed Project implements applicable measures from the Lake Elsinore CAP. Compliance with the City's CAP demonstrates that City-wide GHG emissions would be reduced to 1990 levels by 2020 and 33% below 1990 emission levels by 2030³. Per SB 32, the reduction target is 40% below 1990 levels by 2030, which for purposes of analysis herein, the Project is required to meet to demonstrate a less-than-significant impact. In order to show consistency with SB 32, the Project would need to demonstrate a minimum of 7% reduction through implementation of mitigations measures beyond what is required through the CAP. As shown on Table 4.6-7, *Total Project 2030 Greenhouse Gas Emissions (With Mitigation)*, the Project's 2030 emissions would result in 11,156.33 MTCO₂e per year after implementation of the mitigation measures, regulatory requirements, and Project design features identified above in subsection 4.6.8. This yields an additional reduction of approximately 15% which satisfies the additional 7% needed to meet the SB 32 reduction target, as shown in Table 4.6-8, *Greenhouse Gas Emissions (Without Mitigation vs. With Mitigation)*. Because with mitigation the Project would be consistent with the City's CAP and would demonstrate an additional 15% reduction through implementation of mitigation, regulatory requirements, and Project design features by 2030, the Project would be consistent with the statewide reduction targets for GHG emissions as established by SB 32. Therefore, with regulatory requirements, Project design features, and mitigation measures, the Project's GHG emissions would be consistent with the state's GHG reduction targets and impacts would be reduced to less-than-significant levels. (Urban Crossroads, 2018b, pp. 43-44) .

Table 4.6-7 Total Project 2030 Greenhouse Gas Emissions (With Mitigation)

Emission Source	Emissions (metric tons per year) CO ₂ e
Annual construction-related emissions amortized over 30 years	128.92
Area	43.49
Energy	2,209.95
Mobile Sources	8,353.71
Waste	303.36
Water Usage	116.90
Proposed Project Total Emissions	11,156.33

(Urban Crossroads, 2018b, Table 3-2).

³ This is based on an assumption that the service population ratio for 2020 is equal to the City's 1990 level of emissions (6.6 MTCO₂e/yr/SP), and the 4.4 MTCO₂e/yr/SP reduction specified by the CAP for 2030; this results in a 33% reduction below 1990 emission levels.



Table 4.6-8 Greenhouse Gas Emissions (Without Mitigation vs. With Mitigation)

Emission Source	Emissions (metric tons per year) CO ₂ e	
	Without Mitigation	With Mitigation
Total	13,158.05	11,156.33
Reduction	15.21%	
Project Minimum Improvement	7%	
Meets Requirement?	YES	

(Urban Crossroads, 2018b, Table 3-3)

Threshold b.: Less-than-Cumulatively Considerable Impact with Mitigation. As indicated above under the discussion of Threshold a., with implementation of the required mitigation the Project would be fully consistent with the City of Lake Elsinore CAP, and therefore would be consistent with the GHG reduction targets established by AB 32. Additionally, the Project would not conflict with the CARB Scoping Plan. Furthermore, with implementation of regulatory requirements, Project design features, and mitigation measures, the Project would exceed the GHG reduction target established by SB 32 to reduce emissions to 40% below 1990 levels by 2030. Accordingly, Project impacts due to a conflict with a plan, policy, or regulation adopted to reduce GHG emissions would be reduced to less-than-significant levels.



Table 4.6-8 Greenhouse Gas Emissions (Without Mitigation vs. With Mitigation)

Emission Source	Emissions (metric tons per year) CO ₂ e	
	Without Mitigation	With Mitigation
Total	13,158.05	11,156.33
Reduction	15.21%	
Project Minimum Improvement	7%	
Meets Requirement?	YES	

(Urban Crossroads, 2018b, Table 3-3)

Threshold b.: Less-than-Cumulatively Considerable Impact with Mitigation. As indicated above under the discussion of Threshold a., with implementation of the required mitigation the Project would be fully consistent with the City of Lake Elsinore CAP, and therefore would be consistent with the GHG reduction targets established by AB 32. Additionally, the Project would not conflict with the CARB Scoping Plan. Furthermore, with implementation of regulatory requirements, Project design features, and mitigation measures, the Project would exceed the GHG reduction target established by SB 32 to reduce emissions to 40% below 1990 levels by 2030. Accordingly, Project impacts due to a conflict with a plan, policy, or regulation adopted to reduce GHG emissions would be reduced to less-than-significant levels.



4.7 HAZARDS AND HAZARDOUS MATERIALS

The information and analysis presented in this Subsection is based in part of a technical study that was prepared to determine the presence or absence of hazardous materials on the Project site under existing conditions. The report titled, “Phase I Environmental Site Assessment” (“ESA”) prepared by Terracon Consultants, Inc. (referenced herein as “Terracon”), and dated December 27, 2017, addresses the entire Project site (Terracon, 2017). This report is included as EIR *Technical Appendix F*. Information in this Subsection is also based in part on a technical study for wildfire protection titled, “Fire Protection Plan” and prepared by Firewise 2000, Inc. (referenced herein as “Firewise”), which is dated January 25, 2019 and included as *Technical Appendix G*. (Firewise, 2019).

4.7.1 EXISTING CONDITIONS

A. Definition of Toxic Substances and Hazardous Waste

For purposes of this EIR, the term “toxic substance” is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may present an unreasonable risk of injury to human health or the environment. Toxic substances include: chemical, biological, flammable, explosive, and radioactive substances.

“Hazardous material” is defined as a substance which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: 1) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise mismanaged; or 2) cause or contribute to an increase in mortality or an increase in irreversible or incapacitating illness.

“Hazardous waste” is defined in the California Code of Regulations, Title 22, § 66261.3. The defining characteristics of hazardous waste are: ignitability (oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (strong acids and bases), reactivity (explosives or generates toxic fumes when exposed to air or water), and toxicity (materials listed by the United States Environmental Protection Agency [EPA] as capable of inducing systemic damage to humans or animals).

Certain wastes are called “Listed Wastes” and are found in the California Code of Regulations, Title 22, §§ 66261.30 through 66261.35. Wastes appear on the lists because of their known hazardous nature or because the processes that generate them are known to produce hazardous wastes (which are often complex mixtures).

B. Historical Review, Regulatory Review, and Field Reconnaissance

Terracon performed a search of readily available environmental record sources. The search results are summarized below. The search radius for each data base was one mile from the Project site. Environmental Data Resources, Inc. (EDR) conducted a search for sites listed on various federal and state databases within one mile of the Project site. A detailed description of the results of the regulatory records review is provided in the Project’s ESA, (*Technical Appendix F*), and is summarized below.



1. *Historical Review*

Terracon performed a search of aerial photographs, topographical maps, and Sanborn fire insurance maps, and interviewed property owners in order to determine that past uses of the Project site. The Project site was vacant and undeveloped until approximately 1961 when a structure was developed on the southeast portion of the site. In the late-1960s, additional structures were developed on the southeast portion of the site and an apparent landing strip was developed on the southern portion of the site. By 1978, the landing strip was removed. By 2005, the structures on the southeast portion of the site were removed and site was utilized to stockpile topsoil from the adjacent Nichols Mine, located north of Nichols Road. Site reconnaissance conducted by Terracon, found that the northern portion of the Project site has been filled and graded as part of reclamation activities pursuant to Amendment No. 2 to Reclamation Plan No. 2006-01 (RP 2006-01A2.) (Terracon, 2017, p. 6)

2. *Regulatory Records Review*

Terracon conducted a search for site listed on various federal and state databases within the vicinity of the Project site. The databases provide lists of facilities that use, store, or disposes of hazardous substances, as well as sites with known or suspected contaminated soil or groundwater. The Project site was not located on any of the databases reviewed by Terracon. The database search identified one site, the Nichols Canyon Mine, which is located immediately north of the Project site and is identified in the regulatory database Mines listing. Seventeen unmapped facilities (sites with inadequate address or location information to be mapped) were listed surrounding the Project site. Terracon determined that none of the unmapped facilities were identified as the Project site or adjacent to the Project site. None of the sites in the vicinity of the Project represent a recognized environmental condition (REC) with regards to the Project site. For a more detailed description of the sites identified during the regulatory records review, please refer to EIR *Technical Appendix F*. (Terracon, 2017, pp. 9-11)

3. *Property Owner Interview*

An interview was conducted with the technical services manager of the Project site, Todd Pendergrass. Mr. Pendergrass indicated that he had been familiar with the site since November of 2013. Mr. Pendergrass indicated that there are no current underground storage tanks (USTs) on the Project site that there was not a history of USTs associated with the Project site. No known environmental concerns associated with the site or in the site vicinity were identified. In addition, Mr. Pendergrass was not aware of any pending, threatened, or past environmental litigation, proceedings, or notices of possible violations of environmental laws or liability or potential environmental concerns in connection with the Project site. (Terracon, 2017, p. 8)

4. *Field Reconnaissance*

Terracon conducted an inspection of the Project site on December 12, 2017. Although field reconnaissance took place in 2017, the conditions on-site have not substantially changed since December 2017. Terracon observed that the northern 45.4 acres of the Project site were in the process of being graded as part of mining reclamation activities pursuant to RP 2006-01A2. The southern 27.1 acres were vacant and undeveloped with a moderate growth of weeds and natural vegetation. Overhead power lines were observed across the Project site from near the southeastern corner to a point along Nichols Road in the west-central portion of the Project site. (Terracon, 2017, p. 13)



Remnants of an apparent cistern was observed by Terracon on the south-central portion of the site during field reconnaissance. Staining and/or releases were not observed in the vicinity of the cistern during the site field reconnaissance. Based on site observations, Terracon determined the cistern does not constitute a REC for the Project site. (Terracon, 2017, p. 15)

During Terracon's site visit, one pole-mounted transformer, owned and serviced by Southern California Edison, was observed on one of the power poles in the southeastern portion of the site; however, no evidence of polychlorinated biphenyl (PCB) content of the transformer fluids was observed. Some transformers contain mineral oil which may contain PCBs. Southern California Edison maintains responsibility of the transformer and would be required to replace the transformer fluids only if a release was identified. Evidence of current or prior releases was not observed in the vicinity of the electrical equipment during the site reconnaissance. Based on-site observations, the pole-mounted transformer does not appear to constitute a REC for the Project site. (Terracon, 2017, p. 15)

A small area of stained soil was observed in the northern portion of the Project site. The total area of visibly stained soil was approximately 10 to 12 square feet. The potential cause of stained soil appears to be dripping from heavy equipment or spillage from plastic open-top bins. Terracon noted that the stained soil areas did not appear to represent a REC in connection with the Project site. (Terracon, 2017, p. 15)

Dumped fill dirt was observed on the south-central portion of the site during the site reconnaissance. The amount of dirt was approximately 300 cubic yards. Based on visual surface observations, no other materials appeared within the dumped dirt. Additionally, the dumped fill dirt appeared to be native to the area. Notable odors were not apparent from this area at the time of the site reconnaissance. Based on site observations, the dumped filled dirt does not appear to constitute a REC for the Project site. (Terracon, 2017, p. 15)

Construction/demolition debris was observed on the southeast portion of the site during reconnaissance. The materials consisted of concrete pipes, concrete traffic barriers, and concrete blocks. Terracon noted that the construction/demolition debris did not appear hazardous in nature. Leakage, spills or releases from these materials were not observed during the visual reconnaissance. Based on site observations, the construction/demolition debris did not appear to constitute a REC for the Project site. Additionally, three construction equipment tires, outcrop rock mixed with stock pile of on-site material, boulders, two chain-link fence enclosures with metal lock boxes, a box culvert, heavy construction vehicles, and overhead powerlines were observed during site reconnaissance. RECs were not observed with the on-site observations. (Terracon, 2017, p. 16)

C. Airport Hazards

The Project site is located approximately 12 miles southwest of the March Air Reserve Base, which is the nearest public airport facility within the Project site's vicinity. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project site. The Project site is not located within an airport land use plan and is not located within an Airport Influence Area (AIA). (Lake Elsinore, 2011a, Figure 2.7; Google Earth, 2016)



D. Wildland Fire Hazards

According to the City of Lake Elsinore General Plan Update Environmental Impact Report (EIR), the northern portion of the Project site is located in an area identified as having a “High” susceptibility to wildfires, while the northern most boundary of the Project site along Nichols Road and the southern 27.1 acres of the Project site are identified as having a “Very High” susceptibility to wildfires. (Lake Elsinore, 2011b, Figure 3.10-2)

4.7.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations related to hazards and hazardous materials.

A. Hazardous Materials Regulations and Plans

1. Federal Regulations

☐ **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA)**

The Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the Environmental Protection Agency (EPA) was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup. EPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when they fail to act. Through various enforcement tools, EPA obtains private party cleanup through orders, consent decrees, and other small party settlements. EPA also recovers costs from financially viable individuals and companies once a response action has been completed. (EPA, 2017d)

EPA is authorized to implement the Act in all 50 states and U.S. territories. Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. (EPA, 2017d)

The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). (EPA, 2017d)

☐ **Resource Conservation and Recovery Act (RCRA)**

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. (EPA, 2017e)



The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. (EPA, 2017e)

☐ **Hazardous Materials Transportation Act (HMTA)**

The Hazardous Materials Transportation Act of 1975 (HMTA) empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property." (OSHA, n.d.)

Hazardous materials regulations are subdivided by function into four basic areas:

- Procedures and/or Policies 49 CFR Parts 101, 106, and 107
- Material Designations 49 CFR Part 172
- Packaging Requirements 49 CFR Parts 173, 178, 179, and 180
- Operational Rules 49 CFR Parts 171, 173, 174, 175, 176, and 177 (OSHA, n.d.)

The HMTA is enforced by use of compliance orders [49 USC 1808(a)], civil penalties [49 USC 1809(b)], and injunctive relief (49 USC 1810). The HMTA (Section 112, 40 USC 1811) preempts state and local governmental requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement. (OSHA, n.d.)

☐ **Hazardous Materials Transportation Uniform Safety Act of 1990**

In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. (OSHA, n.d.)

The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials. (OSHA, n.d.)

☐ **Occupational Safety and Health Act (OSHA)**

Congress passed the Occupational and Safety Health Act (OSHA) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. (EPA, 2017f)

In order to establish standards for workplace health and safety, the Act also created the National Institute for Occupational Safety and Health (NIOSH) as the research institution for OSHA. OSHA is a division of the



U.S. Department of Labor that oversees the administration of the Act and enforces standards in all 50 states. (EPA, 2017f)

☐ Toxic Substances Control Act

The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. (EPA, 2017g)

Various sections of TSCA provide authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern.
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.
- Require, under Section 8, reporting and record-keeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform EPA, except where EPA has been adequately informed of such information. EPA screens all TSCA b§8(e) submissions as well as voluntary "For Your Information" (FYI) submissions. The latter are not required by law, but are submitted by industry and public interest groups for a variety of reasons. (EPA, 2017g)

2. *State Regulations*

☐ Cal/OSHA and the California State Plan

Under an agreement with OSHA, since 1973 California has operated an occupational safety and health program in accordance with Section 18 of the federal OSHA. The State of California's Department of Industrial Relations administers the California Occupational Safety and Health Program, commonly referred to as Cal/OSHA. The State of California's Division of Occupational Safety and Health (DOSH) is the principal agency that oversees plan enforcement and consultation. In addition, the California State program has an



independent Standards Board responsible for promulgating State safety and health standards, and reviewing variances. It also has an Appeals Board to adjudicate contested citations and the Division of Labor Standards Enforcement to investigate complaints of discriminatory retaliation in the workplace.

Pursuant to 29 CFR 1952.172, the California State Plan applies to all public and private sector places of employment in the state, with the exception of federal employees, the United States Postal Service, private sector employers on Native American lands, maritime activities on the navigable waterways of the United States, private contractors working on land designated as exclusively under federal jurisdiction and employers that require federal security clearances. Cal/OSHA is the only agency in the state authorized to adopt, amend, or repeal occupational safety and health standards or orders. In addition, the Standards Board maintains standards for certain things not covered by federal standards or enforcement, including: elevators, aerial passenger tramways, amusement rides, pressure vessels and mine safety training. The Cal/OSHA enforcement unit conducts inspections of California workplaces in response to a report of an industrial accident, a complaint about an occupational safety and health hazard, or as part of an inspection program targeting industries with high rates of occupational hazards, fatalities, injuries or illnesses.

☐ **California Hazardous Waste Control Law**

The Hazardous Waste Control Law (HWCL) (Health and Safety Code [HSC], Division 20, Chapter 6.5, Article 2, Section 25100, et seq.) is the primary hazardous waste statute in California. The HWCL implements RCRA as a “cradle-to-grave” waste management system in the state. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure its proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reuse as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and broadening requirements for permitting facilities that treat hazardous waste. It also regulates a number of waste types and waste management activities not covered by federal law (RCRA).

☐ **California Code of Regulations (CCR), Titles 22 and 26**

A variety of California Code of Regulation (CCR) titles address regulations and requirements for generators of hazardous waste. Title 22 contains detailed compliance requirements for hazardous waste generators, transporters, and facilities for treatment, storage, and disposal. Because California is a fully-authorized state according to RCRA, most regulations (i.e., 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the EPA, the integration of state and federal hazardous waste regulations that make up Title 22 does not contain as many exemptions or exclusions as does 40 CFR 260. As with the HSC, Title 22 also regulates a wider range of waste types and waste management activities than does RCRA. To aid the regulated community, California has compiled hazardous materials, waste, and toxics-related regulations from CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24 and 27 into one consolidated listing: CCR Title 26 (Toxics). However, the hazardous waste regulations are still commonly referred to collectively as “Title 22.”



B. Airport and Aircraft Hazards Regulations and Plans

1. State Regulations

□ State Aeronautics Act

The State Aeronautics Commission Act of 1947 created the Division of Aeronautics (“Division”), and was later amended by statute to read the State Aeronautics Act (Aeronautics Act) in 1961. As a result of this legislation, the Division’s first priorities are those mandated by the Aeronautics Act, then Caltrans guidance, then Division guidance as expressed through its Policy Element. As directed by the Aeronautics Act, the Division is a steward and advocate of aviation in California. To that end, its efforts are focused on activities that “protect the public interest in aeronautics and aeronautical progress.” (§ 21002) (Caltrans, 2016, p. 1-2)

The Aeronautics Act itself is divided into six chapters, the first five of which have not received significant cleanup legislation since its enabling in 1947. The first chapter begins with general provisions and definitions and explains the Legislature’s intent for a State aviation program. Chapter two explains Caltrans’ role in administering the Division, and explains the role of the California Transportation Commission (CTC). Chapter three includes many of the safety considerations from Federal Aviation Administration (FAA) regulations that help keep airports and the surrounding communities safe and compatible with flight operations. Chapter four deals with airport and heliport permitting, air navigation facilities, noise guidelines, funding, and importantly, the formation and authority of Airport Land Use Commissions (ALUC). Chapter five covers the investigations and hearings on matters covered in the Aeronautics Act. Finally, Chapter six introduces airport planning and specifically introduces the intent of the CASP and how it can be used to support California aviation. (Caltrans, 2016, p. 1-2)

□ California Environmental Quality Act

The operation of airports and aircraft is the responsibility of the Federal Aviation Administration (FAA), but the requirement to document potential hazards related to airports and air activities when a new project is proposed is contained in CEQA, specifically PRC Section 21096, which states:

“(a) If a lead agency prepares an environmental impact report for a project situated within airport land use compatibility plan boundaries, or, if an airport land use compatibility plan has not been adopted, for a project within two nautical miles of a public airport or public use airport, the Airport Land Use Planning Handbook published by the Division of Aeronautics of the Department of Transportation, in compliance with section 21674.5 of the Public Utilities Code and other documents, shall be utilized as technical resources to assist in the preparation of the environmental impact report as the report relates to airport-related safety hazards and noise problems.

(b) A lead agency shall not adopt a negative declaration for a project described in subdivision (a) unless the lead agency considers whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.”



C. Wildland Fire Hazards Regulations and Plans

1. Federal Regulations

☐ Healthy Forests Restoration Act of 2003

On August 22, 2002, President Bush established the Healthy Forests Initiative, directing the Departments of Agriculture and the Interior, and the Council on Environmental Quality, to improve regulatory processes to ensure more timely decisions, greater efficiency, and better results in reducing the risk of catastrophic wildland fires. On June 5, 2003, the Departments of Agriculture and the Interior adopted two new categorical exclusions from documentation in an environmental assessment or environmental impact statement (EIS): an exclusion for hazardous-fuel reduction and another for rehabilitation of resources and infrastructure damaged by wildfire (68 FR 33814).

This act also defines “communities at risk” as those “wildland urban interface communities within the vicinity of federal lands that are at high risk from wildfire.” For California, CalFire has expanded this definition to include all communities (regardless of distance from federal lands) for which a significant threat to human life or property exists as a result of a wildland fire event. According to the 2010 California Strategic Fire Plan (page E-1), factors used to determine at-risk communities include: high fuel hazard, probability of a fire and proximity of intermingles wildland fuels, and urban environments near fire threats.

2. State Regulations

☐ Public Resources Code (PRC) Sections 4290-4299

These sections establish minimum statewide fire safety provisions pertaining to: roads for fire equipment access; signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fire fuel breaks and greenbelts. With certain exceptions, all new construction after July 1, 1991, in potential wildland fire areas, is required to meet these statewide standards. The state requirements, however, do not supersede more restrictive local regulations.

As defined by CalFire, wildland areas defined as State Responsibility Areas (SRAs) may contain substantial wildfire risks and hazards. They consist of lands exclusive of cities, and federal lands regardless of ownership. The primary financial responsibility for preventing and suppressing fires within wildlands belongs to the State of California. However, it is not the State of California’s responsibility to provide fire protection services to buildings or structures located within the wildlands unless CalFire has entered into a cooperative agreement with a local agency for those purposes pursuant to PRC Section 4142. As such, wildland areas require disclosure of these fire hazards in real estate transactions, and owners of properties in wildland areas are subject to PRC Section 4291 maintenance requirements. The law requires CalFire every five years (1991, 1996, 2001, etc.) to provide maps identifying the boundaries of lands classified as SRAs to the Riverside County Assessor.

☐ PRC Section 4213 – Fire Prevention Fees

Pursuant to PRC Section 4213, in July of 2011, the State of California began assessing an annual “Fire Prevention Fee” for all habitable structures within SRAs to pay for fire prevention services. SRAs are the portions of California where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within incorporated city boundaries, Tribal or



federally owned land. As of 2013, the fee is up to \$150 per habitable structure (i.e., a building that can be occupied for residential use, which does not include incidental buildings such as detached garages, barns, outdoor bathrooms, sheds, etc.).

☐ **California Government Code (CGC) Section 51178**

This section specifies that the Director of CalFire, in cooperation with local fire authorities, shall identify areas that are Very High Fire Hazard Severity Zones (VHFHSZ) in Local Responsibility Areas (LRAs), based on consistent statewide criteria, and the expected severity of fire hazard. Per CGC § 51178, a local agency may, at its discretion, exclude from the requirements of § 51182 an area within its jurisdiction that has been identified as a VHFHSZ, if it provides substantial evidence in the record that the requirements of § 51182 are not necessary for effective fire protection within the area. Alternatively, local agencies may include areas not identified as VHFHSZ by CalFire, following a finding supported by substantial evidence in the record that the requirements of § 51182 are necessary for effective fire protection within the new area. According to § 51182, such changes made by a local agency shall be final, and shall not be rebuttable by CalFire.

☐ **California Code of Regulations (CCR) Title 14 – Natural Resources**

These regulations constitute the basic wildland fire protection standards of the California Board of Forestry. They were prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development within SRAs. Among other things, Title 14 requires the design, and construction of structures, subdivisions, and developments in an SRA provide for basic emergency access and perimeter wildfire protection measures (fire fuel modification zones, etc.).

☐ **CCR Title 24, Parts 2 and 9 – Fire Codes**

Part 2 of Title 24 of the CCR refers to the California Building Code, which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety, and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. In particular, Chapter 7A, “Materials and Construction Methods for Exterior Wildfire Exposure,” in the 2010 California Building Code addresses fire safety standards for new construction. In addition, Section 701A.3.2, “New Buildings Located in Any Fire Hazard Severity Zone,” states:

“New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.”

☐ **California Health and Safety Code (Division 20, Chapter 6.95, § 25500 et seq)**

The California Health and Safety Code (Division 20, Chapter 6.95, § 25500) establishes minimum statewide standards for Hazardous Materials Business Emergency Plans (HMBEPs). HMBEPs contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Businesses are required to prepare a HMBEP if that business uses, handles, or stores a hazardous material or



an extremely hazardous material in quantities greater than or equal to the following: 1) 500 pounds of a solid substance; 2) 55 gallons of a liquid; 3) 200 cubic feet of compressed gas; 4) a hazardous compressed gas in any amount; or 5) hazardous waste in any quantity.

4.7.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact due to hazards and hazardous materials if the Project or any Project-related component would:

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*
- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*
- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;*
- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;*
- f. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or*
- g. *Expose people or structures to a significant risk of loss, injury, or death involving wildland fires;*
- h. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones and any of the following occurs as a result of the Project:*
 - i) *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;*
 - ii) *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or*
 - iii) *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.*

The above listed thresholds are derived directly from Sections IX and XX of Appendix G to the CEQA Guidelines and address typical adverse effects due to hazards, hazardous materials, and wildfire hazards (OPR, 2018).



4.7.4 IMPACT ANALYSIS

Threshold a: *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Threshold 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?*

Implementation of the proposed Project has the potential to expose future site workers and/or residents to hazardous materials or conditions and has the potential to result in the accidental release of hazardous materials into the environment associated with the existing site conditions, construction activities, and long-term operation of the proposed Project. Each is discussed below.

Existing Site Conditions

Based on the Phase I ESA conducted by Terracon (EIR *Technical Appendix F*), and based on a review of regulatory databases, historical conditions of the Project site, and a site reconnaissance, the Project site does not contain any RECs, nor is the Project site affected by any off-site RECs. No odors, pools of liquids, drums, significantly stained soil, unidentified subsurface containers, distressed vegetation, pits, or unmaintained ponds were observed. One pole-mounted transformer was observed in the southeastern of the Project site. No leaking or staining was observed in the area surrounding the transformer. Based on these findings, Terracon concluded there are no conditions associated with the Project site's existing condition or surroundings that would create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials. Accordingly, no impact would occur associated with the Project site's existing conditions. (Terracon, 2017, pp. i-ii; 13-16)

Temporary Construction Related Activities

Heavy equipment that would be used during construction of the proposed Project would be fueled and maintained by substances such as oil, diesel fuel, gasoline, hydraulic fluid, and other liquid materials that would be considered hazardous if improperly stored or handled. In addition, materials such as paints, roofing materials, solvents, and other substances typically used in building construction would be located on the Project site during construction. Improper use, storage, or transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with Project construction activities than would occur on any other similar construction site. Thus, impacts due to construction activities would not cause a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials, and a less-than-significant impact would occur.

Long-Term Operation

The Project propose development of 168 single-family homes; 14.5 acres of commercial uses accommodating a 130-room hotel, 6,000 s.f. of fast-food restaurant uses with drive-through window use, 5,500 s.f. of fast-food restaurant uses without drive-through window use, 9,400 s.f. of sit-down restaurant uses, 4,400 s.f. of



commercial retail uses, an 8,000 s.f. health and fitness club, a gas station (including market and car wash) with 16 fueling stations, and 43,000 s.f. of office uses; and recreation uses. With the exception of the proposed gas station (discussed in further detail below), none of the proposed uses (residential, commercial, and recreational) are associated with the transport, use, or disposal of significant quantities of hazardous materials. Household and other goods used by residential homes and retail uses that contain toxic substances are usually low in concentration and small in amount; therefore, there is no significant risk to humans or the environment from the use of such household goods. Residents and employees are required to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility. Also, as of February 2006, fluorescent lamps, batteries, and mercury thermostats can no longer be disposed in the trash. Furthermore, the transport, use, and disposal of hazardous materials are fully regulated by the EPA, state, and/or the City of Lake Elsinore. With mandatory regulatory compliance, potential hazardous materials impacts associated with the residential, commercial (excluding the proposed gas station), and recreational uses associated with long-term operation of the Project would be less than significant.

The planned gas station would have the potential to use and store hazardous and flammable materials on the Project site. The gas station would include an UST. Due to the potential on-site storage of hazardous materials during long-term operation, the Project would be subject to compliance with the California Health and Safety Code § 25507, which requires a Hazardous Materials Business Emergency Plan (HMBEP). The HMBEP requires the disclosure of the inventory of hazardous materials and provides procedures to follow in the event of an emergency situation (such as a fire or hazardous spill). Oversight for this plan is provided by the Riverside County Department of Environmental Health (RCDEH) and would be revised annually and renewed every three years. Furthermore, due to the nature of the gas station component of the proposed Project, the Project would be subject to routine inspection by federal, state, and local regulatory agencies with jurisdiction over fuel dispensing facilities. These regulations and regulatory agencies include: provisions established by Section 2540.7, *Gasoline Dispensing and Service Stations*, of the California Occupational Safety and Health Regulations; Chapter 38, *Liquefied Petroleum Gases*, of the California Fire Code; and the RCDEH. Under the above provisions including the routine inspection of the gas station, the permitted USTs, and all associated fuel delivery infrastructure, as well as compliance with all federal, state and local regulations would ensure that the Project operates in a manner that poses no substantial hazards to the public or the environment.

Additionally, as the Project would feature fueling stations, various standard conditions to minimize hazardous materials impacts related to fueling stations would be applicable to the Project. These standard conditions are monitored by RCDEH, the State-designated local Certified Unified Program Agency (CUPA) managing hazardous materials programs within the City of Lake Elsinore and throughout Riverside County. In addition to other programs and requirements that may be applicable, as determined by the RCDEH, the following programs may also apply to the fueling stations: Certificate of Disclosure of Hazardous Substances (Business Emergency Plan), Hazardous Waste Generator Permit, and Underground Storage Tank Permit.

The operation of the proposed fueling station component of the Project would be required to comply with all applicable federal, State, and local regulations to ensure the proper transport, use, and disposal of hazardous substances (as described in subsection 4.7.2 above). With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project is not expected to pose a



significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, nor would the Project increase the potential for accident operations which could result in the release of hazardous materials into the environment.

In addition, SCQAMD released a Health Risk Assessment for Gas Stations which estimated the residential and occupational cancer risk for gasoline service stations. Hazards associated with cancer risk are considered significant if the incremental risk is equivalent to or greater than 10 persons in one million persons. For the proposed residential uses, at a distance of 85 feet (the minimum distance between gas station uses and residential uses per proposed Nichols Ranch Specific Plan Table III-1, *Development Standards – General Commercial*), the cancer risk was determined to be 4.31 in one million persons per one million gallons throughput per year (gpy) (SCAQMD, 2007, Table 3). According to the National Association of Convenience Stores, the average gas station sells approximately 1,788,500 gpy (NACS, 2018). Thus, at a distance of 85 feet, the cancer risk to downwind residential uses would be 7.33 persons in one million ($4.31 \text{ persons in one million} \times 1,788,500 \text{ gpy} / 1,000,000 \text{ gpy} = 7.33 \text{ persons in one million}$). For the proposed commercial uses, at a distance of 85 feet (the minimum distance studied by SCAQMD) the occupational cancer risk was determined to be 0.81 in one million per one million gpy. Thus, at a distance of 85 feet, the cancer risk to downwind occupational uses would be 1.43 persons in one million ($0.81 \text{ persons in one million} \times 1,788,500 \text{ gpy} / 1,000,000 \text{ gpy} = 1.43 \text{ persons in one million}$). Although proposed occupational commercial uses may be located closer than 85 feet to the gas station, it is reasonable to assume cancer risks would not reach the 10 in one million significance threshold. The Project's cancer risk due to gasoline service stations for both residential and occupational uses is less than the 10 persons in one million threshold used by SCAQMD to determine a significant cancer hazard risk, thus impacts would be less than significant. (SCAQMD, 2007, pp. 9,14)

With mandatory regulatory compliance with federal, State, and local laws (as described above), potential hazardous materials impacts associated with long-term operation of the Project would be less than significant.

Threshold c: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The Project site is located immediately north of the Temescal Canyon High School. The nearest building at the Temescal Canyon High School is located 55 feet mile from the Project site. The Project consists of a proposal to allow for future development of residential, commercial, and recreational uses. With the exception of the proposed gas station (discussed in further detail below), the proposed uses on the Project site are not associated with the transport, use, or disposal of significant quantities of hazardous materials.

As the Project would feature fueling stations, various standard conditions to minimize hazardous materials impacts related to fueling stations would be applicable to the Project. These standard conditions are monitored by RCDEH, the State-designated local CUPA managing hazardous materials programs within the City of Lake Elsinore and throughout Riverside County. In addition to other programs and requirements that may be applicable, as determined by the RCDEH, the following programs may also apply to the fueling stations: Certificate of Disclosure of Hazardous Substances (Business Emergency Plan), Hazardous Waste Generator Permit, and Underground Storage Tank Permit.



The operation of the proposed fueling station component of the Project would be required to comply with all applicable federal, State, and local regulations to ensure the proper transport, use, and disposal of hazardous substances (as described in subsection 4.7.2 above). With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project is not expected to pose a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, nor would the Project increase the potential for accident operations which could result in the release of hazardous materials into the environment.

SCQAMD released a Health Risk Assessment for Gas Stations which estimated the residential and occupational cancer risk for Gasoline Service Stations. Hazards associated with cancer risk are considered significant if the risk is calculated to be 10 persons in one million persons or greater. In order to provide a worst-case analysis, the residential cancer risk was used to estimate cancer risks for the sensitive receptors at Temescal Canyon High School. At a distance of 900 feet (the distance from the Project's commercial boundary to the nearest facility at Temescal Canyon High School), the cancer risk was determined to be 0.01 in one million persons per one million gpy (SCAQMD, 2007, Table 3). According to the National Association of Convenience Stores, the average gas station sells approximately 1,788,500 gpy (NACS, 2018). Thus, at a distance of 900 feet, the cancer risk to Temescal Canyon High School would be 0.02 persons in one million (0.01 persons in one million/1,000,000 gpy x 1,788,500 gpy = 0.02 persons in one million). The proposed gas station would be located approximately 900 feet away or more from the nearest building at Temescal Canyon High School, thus, impacts due to exposure of Temescal Canyon High School to cancer-related hazard risks would be less than the 10 in one million threshold used by SCAQMD, and impacts would be less than significant.

As such, with mandatory regulatory compliance with federal, State, and local laws (as described above), impacts to nearby schools due to the Project emitting hazardous emissions or handling hazardous materials would be less than significant.

Threshold d: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

According to the Phase I ESA prepared for the Project (EIR *Technical Appendix F*), the Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Accordingly, no impact would occur. (Terracon, 2017, pp. 9-11)

Threshold e: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest public airport is the March Air Reserve Base, located approximately 12 miles northeast of the Project site, and the Project is not located within the AIA of the March Air Reserve Base. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project site. The Project is not within the AIA for Skylark Field. (Lake Elsinore, 2011a, Figure 2-7; Google Earth,



2016) As such, the proposed Project would not expose people residing or working in the area to safety hazards associated with public airports, and impacts would be less than significant.

Threshold f: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and at Project build-out, the proposed Project would be required to maintain adequate access for emergency vehicles. Accordingly, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan, and impacts would be less than significant.

Threshold g: 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

Threshold h: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

- i) Expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors, as a result of an exacerbation of wildfire risks?***
- ii) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? or***
- iii) 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 northern portion of the Project site is located in an area identified as having a “High” susceptibility to wildfires, while the northern most boundary of the Project site along Nichols Road and the southern 27.1 acres of the Project site are identified as having a “Very High” susceptibility to wildfires (Lake Elsinore, 2011b, Figure 3.10-2).

The Project site would be surrounded by improved roadways which would provide buffer area from fire hazards. Nichols Road would provide 120 feet of buffer area under ultimate roadway buildout conditions and 30-60 feet of buffer under interim conditions within the right-of-way (ROW). El Toro Road would provide a 70-foot buffer consisting of 60 feet of improved ROW and a 10-foot landscape buffer, while Wood Mesa Court would provide an 80-foot buffer consisting of 60 feet of improved ROW and a 10-foot landscape buffer. Additionally, the Project site would be buffered along the western boundary by Interstate 15 (I-15). A buffer distance of between 30-120 feet as provided by these roads and buffer as provided by I-15 would reduce the site’s potential for fire hazards.

Although roadway buffers would reduce potential fire hazards, the Project would preserve Stovepipe Creek, which traverses from the Project’s northeastern boundary and exits through the Project’s southwestern



boundary and has a “High” and “Very High” susceptibility to wildfires. A Fire Protection Plan (FPP) was prepared for the Project site by Firewise 2000, Inc. and is included as EIR *Technical Appendix G*.

Firewise used the “BehavePlus Fire Modeling System 5.0.5” model to measure to intensity of a fire moving toward the proposed Project to design a protection system that would ensure that the Project would be safe from potential wildland fires even without fire department suppression activities. The predominate fuels in or near the Project site consist of grasses, scrubs, and shrubs. (Firewise, 2019, pp. 4, 9-10)

Based on proposed and natural slope gradients, the aspect of existing and proposed slopes on site, wind patterns and other inputs, the maximum calculated flame length for a wildland fire affecting the site was calculated to be 55.2 feet. While the modeling indicates that flame lengths of 55.2 feet are possible under perfect conditions, this scenario would only occur if during a late fire season winds reached 70 miles per hour from the north, northeast, and east. For the majority of the Project site flanking fire of 15 feet or less is expected on the Project site prior to implementation of fuel modification measures. (Firewise, 2019, pp. 10-15)

Flame lengths and fire intensity would be reduced by the installation and maintenance of a Fuel Modification Plan through the use of irrigated zones and possible radiant head walls surrounding homes on certain areas of the Project site. Specifically, and as required by the Master Fire Protection Plan provisions of the Nichols Ranch Specific Plan, the following requirements would apply (Firewise, 2019, pp. 18-21):

- Zone 1: Zone 1 would consist of a 10-foot setback between buildings and trees. Zone 1 would generally be located within the rear yard and side yards of the homes within residential Planning Areas that are in close proximity to Stovepipe Creek.
- Zone 2: Zone 2 would consist of landscaping and manufactured slopes that would be irrigated and fire resistant. Zone 2 would generally be located in the landscaping areas outside of homeowner lots, starting from the lot parcel line extending outwards, parks, roadway landscaping, and manufactured slopes.
- Zone 3: Zone 3 would consist of thinning treatment to ensure that areas are free of any dead and dying combustible vegetation. Zone 3 would generally be located within the detention basins and manufactured slopes within Planning Area 13.
- Special Fire Protection Features: Special Fire Protection Features would be required for a few homes within residential Planning Areas 1, 2, and 5 because they do not meet the minimum 100-foot fuel treatment setback. For any home or building that is located less than 100 feet from Stovepipe Creek or the natural open space located north of Nichols Road, a 6-foot tall wall would be required to limit any actual radiant fire that may start in the creek or open space areas. No combustible landscaping would be allowed within five feet of the structure and no trees would be allowed on these residential lots. Additional construction standards would be required for these homes as described in the FPP.

Refer to Figure 3-10, *Conceptual Fire Protection Plan*, for the location of each fuel modification zone proposed for the Project.



Based on the scientific fire behavior analysis conducted by Firewise and assuming mandatory compliance with the required fuel modification design criteria as required by the Nichols Ranch Specific Plan, exterior portions of future structures or attic spaces would not ignite from the exterior fire exposure from a wildland vegetation fire. This is primarily because the greatest fire energy would be too far away from the structures due to the low plant densities within the defensible spaces zones and the construction feature requirements.

Compliance with the requirements of the FPP, as required by the Nichols Ranch Specific Plan would reduce impacts due to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires to less than significant. Furthermore, the Project would be developed in a manner consistent with the jurisdictional requirements for fire protection and would generally decrease the fire hazard in the local area. Additionally, the Project would not exacerbate wildfire risks, and would not increase the likelihood that Project occupants could be exposed to pollutant concentrations for a wildfire or the uncontrolled spread of a wildfire. In addition, the only infrastructure required by the Project's FPP are fire walls, fire hydrants, and the proposed fuel modification zones. The proposed infrastructure would reduce potential fire risks on site and would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Moreover, although there are steep slopes with natural vegetation to the north of the Project site, this existing hillside exhibits very shallow bedrock; as such, these slopes would not be subject to landslides even in the event of a fire and subsequent rain events. Therefore, impacts regarding wildland fire hazards, including where wildlands are adjacent to urbanized areas or where residents are intermixed with wildlands, would be less than significant.

4.7.5 CUMULATIVE IMPACT ANALYSIS

Because the issue of hazards and hazardous materials tend to be site-specific in nature, the cumulative study area includes existing and planned developments within a one-mile radius of the Project site. A one-mile radius is appropriate because that is the standard distance used in regulatory database searches of properties that may generate or store toxic materials.

There are no known hazards located on the Project site under existing conditions. During Project construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project as proposed would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. Accordingly, impacts associated with the routine transport, use, or disposal of hazardous materials, and impacts associated with reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, would be less-than-cumulatively considerable.

The Project site is located immediately adjacent to the Temescal Canyon High School. The only component of the Project that would have the potential to emit hazardous emissions or handle hazardous materials on-site would be the proposed gas station. The proposed gas station would handle hazardous materials within one-quarter mile of a school; however, the gas station's hazardous emissions would be below the cancer-related hazardous risk threshold established by SCAQMD. The remaining proposed uses for the Project site are not associated with the transport, use, or disposal of significant quantities of hazardous materials. Thus, the Project's impact due to emitting hazardous emissions or handle hazardous materials within one-quarter mile of an existing or proposed school would be less than significant. Other developments would be required to



demonstrate that any hazardous emissions that would result from the development is below the established hazardous risk threshold. Therefore, impacts would be less-than-cumulatively-considerable.

The Project site is not located on the list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Therefore, the Project would not contribute to a cumulatively-considerable hazardous materials impact associated with a listed hazardous materials site.

The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest public airport is the March Air Reserve Base, located approximately 12 miles northeast of the Project site, and the Project is not located within the Airport Influence Area of the March Air Reserve Base. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project site. The Project is not within the Airport Influence Area for Skylark Field. As such, the Project's potential to expose people residing or working in the area to safety hazards associated with public airports, and impacts would be less-than-cumulatively-considerable.

The nearest private airport facility to the Project site is Skylark Field, located approximately 5.7 miles southeast of the Project site. The Project site is not located within the AIA for this facility, indicating operations at Skylark Field are unlikely to create a safety hazard for people working or residing in the Project area. Thus, the Project would not result in safety hazards due to proximity to a private airstrip. There are no components of the proposed Project that would result in a cumulatively-considerable impact due to safety hazards in proximity of a private airstrip.

The Project site does not contain any emergency facilities nor would it impact an emergency evacuation route. Other cumulative developments would be reviewed by the City of Lake Elsinore to ensure no interference with emergency access and evacuation routes would occur. Accordingly, the Project would result in less-than-cumulatively-considerable impacts due to a conflict with emergency evacuation plans and evacuation routes.

As discussed above under the analysis of Threshold h the northern portion of the Project site is located in an area identified as having a "High" susceptibility to wildfires, while the northern most boundary of the Project site along Nichols Road and the southern 27.1 acres of the Project site identified as having a "Very High" susceptibility to wildfires. The Project would be surrounded by improved roadways with a buffer distance of 30-60 feet as provided by Project roadways (Nichols Road, El Toro Road, and Wood Mesa Court) and I-15 would reduce the site's potential for fire hazards. In addition, the Project would be subject to mandatory compliance with the recommendations of the FPP as required by the Nichols Ranch Specific Plan, which requires implementation of fuel modification zones and other fire hazard design features on the Project site. Furthermore, the Project site would be developed in a manner consistent with jurisdictional requirements for fire protection, and would generally decrease fire hazards in the local area. Other developments within the study area also would be subject to the jurisdictional requirements for fire protection. As such, within the cumulative context of the Project vicinity, fire hazards are anticipated to decline over time, and the Project has no potential to contribute to cumulatively significant impacts associated with wildland fire hazards.



4.7.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. Under existing conditions, no hazards were found on the Project site. During Project construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project as proposed would not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

Threshold b: Less-than-Significant Impact. Under existing conditions, no hazards were found on the Project site. During Project construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project as proposed would not create a significant hazard to the public or the environment through accident conditions involving the release of hazardous materials. Thus, the Project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials in the environment.

Threshold c: Less-than-Significant Impact. The Project site is located immediately adjacent to the Temescal Canyon High School. The only component of the Project that would have the potential to emit hazardous emissions or handle hazardous materials on-site would be the proposed gas station. The proposed gas station would handle hazardous materials within one-quarter mile of a school; however, the gas station's hazardous emissions would be below the cancer-related hazardous risk threshold established by SCAQMD and would be subject to regulatory requirements and routine inspections. The remaining proposed uses for the Project site are not associated with the transport, use, or disposal of significant quantities of hazardous materials. Thus, the Project's impact due to emitting hazardous emissions or handle hazardous materials within one-quarter mile of an existing or proposed school would be less than significant.

Threshold d: No Impact. The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Accordingly, no impact would occur.

Threshold e: Less-than-Significant Impact. The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest public airport is the March Air Reserve Base, located approximately 12 miles northeast of the Project site, and the Project is not located within the AIA of the March Air Reserve Base. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project site. The Project is not within the AIA for Skylark Field. As such, the proposed Project would not expose people residing or working in the area to safety hazards associated with public airports, and impacts would be less than significant.

Threshold f: Less-than-Significant Impact. The Project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route and the Project would be required to maintain access during construction. Thus, impacts would be less than significant.

Thresholds g and h: Less-than-Significant Impact. According to the City of Lake Elsinore General Plan Update EIR, the Project site is identified as having a "High" and "Very High" susceptibility to wildfires. Nichols Road, El Toro Road, Wood Mesa Court, and I-15 would provide buffers around the Project site. A buffer distance of between 30-60 feet as provided by these roads and buffer as provided by I-15 would reduce the



site's potential for fire hazards. In addition, the Project would be subject to mandatory compliance with the recommendations of the FPP as required by the Nichols Ranch Specific Plan, which requires implementation of fuel modification zones and other fire hazard design features on the Project site. Furthermore, the Project site would be developed in a manner consistent with jurisdictional requirements for fire protection and would generally decrease the fire hazard in the local area. As such, impacts regarding wildland fires would be less than significant.

4.7.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project shall comply with California Health and Safety Code § 25507, which requires a Hazardous Materials Business Emergency Plan (HMBEP). The HMBEP requires the disclosure of the inventory of hazardous materials and provides procedures to follow in the event of an emergency situation (such as a fire or hazardous spill). Oversight for this plan is provided by the Riverside County Department of Environmental Health (RCDEH) and would be revised annually and renewed every three years.
- The Project shall comply with Section 2540.7, *Gasoline Dispensing and Service Stations*, of the California Occupational Safety and Health Regulations;
- The Project shall comply with Chapter 38, *Liquefied Petroleum Gases*, of the California Fire Code and the RCDEH.
- The Project shall comply with Title 22, Division 4.5 of the California Code of Regulations, which requires residents and employees to dispose of household hazardous waste, including pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals, at a Household Hazardous Waste Collection Facility.
- The Project shall comply with Title 22, Division 4.5, Chapter 11 of the California Code of Regulations which requires fluorescent lamps, batteries, and mercury thermostats be recycled or taken to a Household Hazardous Waste Collection Facility.
- The Project shall comply with the requirements of the Nichols Ranch Specific Plan. Compliance with the Nichols Ranch Specific Plan standards include but are not limited to improvements to surrounding roadway, compliance with standards related to fuel modification zones, maintenance of fuel modification zones, landscape, and fire protection features which would be assured by the City's future review of implementing building permits for compliance with the Nichols Ranch Specific Plan.
- In conformance with the requirements of the Nichols Ranch Specific Plan, and as a component of future building permit applications, the Building Official (or his/her designee) shall verify that all of the recommendations given in the Project's Fire Protection Plan (*Technical Appendix G*) with respect to fuel management zones have been incorporated into the building permit application(s). The fuel management zones shall consist of following zones, as conceptually depicted on Figure II-10, of the Nichols Ranch Specific Plan:



- Zone 1: Zone 1 would consist of a 10-foot setback between buildings and trees. Zone 1 would generally be located within the rear yard and side yards of the homes within residential Planning Areas that are in close proximity to Stovepipe Creek.
- Zone 2: Zone 2 would consist of landscaping and manufactured slopes that would be irrigated and fire resistant. Zone 2 would generally be located in the landscaping areas outside of homeowner lots, starting from the lot parcel line extending outwards, parks, roadway landscaping, and manufactured slopes.
- Zone 3: Zone 3 would consist of thinning treatment to ensure that areas are free of any dead and dying combustible vegetation. Zone 3 would generally be located within the detention basins and manufactured slopes within Planning Area 13.
- Special Fire Protection Features: Special Fire Protection Features would be required for a few homes within residential Planning Areas 1, 2, and 5 because they do not meet the minimum 100-foot fuel treatment setback. For any home or building that is located less than 100 feet from Stovepipe Creek or the natural open space located north of Planning Area 2 and Nichols Road, a 6-foot tall wall would be required to limit any actual radiant fire that may start in the creek or open space areas. No combustible landscaping would be allowed within five feet of the structure and no trees would be allowed on these residential lots. Additional construction standards would be required for these homes as described in the FPP.
- As a component of future building permit applications, the Building Official (or his/her designee) shall verify that all of the recommendations given in the Project's Fire Protection Plan (*Technical Appendix G*) with respect to construction requirements have been incorporated into the building permit application(s). The construction requirements include the following:
 - For areas with less than 100 feet of overall fuel treatment the following building enhancements will be required. Refer to Section 2.4 of the FPP for detailed specific flame lengths for these areas:
 - Exterior walls facing the open space shall be one (1) hour fire resistance rated tested in accordance with ASTM E119 or UL263 with one layer of 5/8-inch Type X gypsum sheathing on interior and exterior surfaces to prevent exposure from both sides and shall have no underfloor or attic vent openings. Stucco shall be applied over the gypsum wall assembly.
 - Appendages and projections attached to exterior fire-resistive walls, shall be constructed to maintain the same fire-resistant standards as the exterior walls of the structure.
 - If the roof profile allows a space between the roof covering and roof decking, the roof area will have one layer of minimum 72-pound (32.4 kg) mineral-surfaced, non-perforated cap sheet complying with ASTM D 3909 installed over the combustible decking.
 - Fire sprinklers shall be installed throughout the attics and installed in accordance with manufacturer's instructions, the referenced standard should be followed as a minimum. Fire sprinklers will require a four (4) head calculation for the sprinkler design. The four-head calculation must have a minimum .05 density design, QR and intermediate temperature heads; the heads may be of a small orifice type such as 3/8 or 7/16. Listed domestic demand shutoff valves may be used to try to minimize upgrading meter sizes where possible.



- Copper piping is required in the attics; chlorinated polyvinyl chloride (CPVC) will only be permitted in the attic if listed heads are used to protect piping in accordance with their listing. Lots shall have a 6-foot masonry fire wall, which may have up to 3 feet of rated glass to provide for a view. This will block the defensible space area around the home from the creek area.
- Lots 14, 15, 16, 23 and 24 within five (5) feet of the structure envelope no combustible landscaping will be allowed, no trees will be allowed on the parcel. The exception will be the front of the structure facing the access.
- Lot 14, 15, 16, 23 and 24 have the greatest exposure to an off-shore wind driven fire and shall have fire sprinklers extended to the under-eave areas installed in accordance with manufacturer's instructions and acceptable to Riverside County/Lake Elsinore Fire Department standards. The heads should be installed at equal distance on eave areas facing open space. This will protect the structure envelope in future years against burning combustible material near and around structure envelope.
- All structures within the development site shall meet all wildland/interface standards to the satisfaction of the Riverside County Fire Department (RCFD). Design and construction shall meet the requirements listed in the 2016 Edition of the Fire and Building Codes, with special adherence to Chapter 7A, and the 2016 Edition of the California Residential Code section R337, with other local amendments/ordinances adopted by RVCFD. Other applicable codes include the 2013 International Wildland-Urban Interface Code (IWUIC). For a description of the current construction requirements as of the date of this report (see Appendix E of EIR *Technical Appendix G*).
- All accessory structures such as decks, balconies, patios, covers, gazebos and fences shall be built from non-combustible or ignition resistant materials. The homeowner(s) are not restricted from having concrete patios, concrete walkways or swimming pools within the Vegetation Management Zones in compliance with other codes. Refer to Appendix D of EIR *Technical Appendix G* for photos and descriptions of non-combustible decks, patio covers, and railings for these accessory structures. Construction or building permits shall not be issued until the fire code official inspects and approves required vegetation clearance, fire apparatus access and water supply for the construction site. The issuance of building permits with regard to these requirements shall be in accordance with RVCFD. Prior to the delivery of combustible building construction materials to the project site the following conditions shall be completed to the satisfaction of the RVCFD:
- All wet and dry utilities shall be installed and approved by the appropriate inspecting department or agency.
- Clearance of Zone 1, 2 and 3 vegetation management shall be provided prior to combustible material arriving on the site and shall be maintained throughout the duration of construction. Fire code officials may require additional vegetation management and/or defensible space when warranted.
- Additional requirements as listed in the development will be adhere to:



- Mobile stationary or portable powered operated equipment in the HFA shall not be used without the RVCFD written approval. Specific fire protection measures that may be required to mitigate the hazard include, but are not limited to:
 - A standby water tender, equipped with a pump, fire hose and nozzle.
 - Pre-wetting of the site to avoid the production of sparks between blades, tracks and rocks.
 - Conducting a fire watch for a minimum of one-hour following the cessation of operations each day
 - For welding cutting or grinding work, clear away all combustible material from the area around such operations for a minimum distance of 10 feet. A hot-work permit may be required prior to commencing work.
 - Maintain a serviceable round point shovel with an overall length of not less than forty-six (46) inches and a five (5) gallon backpack water pump-type fire extinguisher fully equipped and ready for use at the immediate area during the operation.
- All homes will require NFPA 13D Residential Sprinklers, engineered to the satisfaction of RVCFD. Those lot listed in Section 5, requiring special mitigation measures shall have under eave sprinklers on the exterior of the structure.
- Fire access roads shall meet the requirements of the RVCFD, and shall be a paved surface capable of supporting loads of 80,000 lbs gross vehicle weight. Access to all portions of the building must be within 150 feet of the available fire department access. Fire access roads shall be maintained for clear access of emergency vehicles. The proposed development requires primary and secondary access at the time of construction.
- Any gates crossing fire access into the development must be installed to Riverside County/Lake Elsinore Fire Department standards and shall be approved prior to fabrication and installation. Gates crossing access into the development must have a “Knox” override key switch installed outside the gate in an approved, readily visible, and unobstructed location to provide emergency access, in addition gates shall be equipped with an infrared gate opening device in accordance with Riverside County/Lake Elsinore standards

Mitigation

Impacts to Hazards, Hazardous Materials, and Wildfire Hazards as a result of Project implementation would be less than significant and mitigation is not required.



4.8 HISTORIC AND ARCHAEOLOGICAL RESOURCES

The analysis in this Subsection is based on a site-specific cultural resources assessment report titled “A Phase I and II Cultural Resources Assessment for the Nichols Ranch Specific Plan Project” (dated April 28, 2018). The report was prepared by Brian F. Smith and Associates (BFSA) and is included as *Technical Appendix H* to this EIR. All references used in this Subsection are included in EIR Section 7.0, *References*. Confidential information has been redacted from *Technical Appendix H* for purposes of public review. In addition, much of the written and oral communication between Native American tribes, the City of Lake Elsinore, and BFSA is considered confidential in respect to places that have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archaeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.8.1 EXISTING CONDITIONS

A. Prehistoric and Historic Setting

1. Prehistoric Period Setting

The Project site is located in the northeastern portion of the City of Lake Elsinore in western Riverside County. The Paleo Indian, Archaic Period Milling Stone Horizon, and the Late Prehistoric Shoshonean groups are the three general cultural periods represented in Riverside County, as summarized briefly below. The following discussion of the cultural history of Riverside County references the San Dieguito Complex, Encinitas Tradition, Milling Stone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex, since these culture sequences have been used to describe archaeological manifestations in the region. The Late Prehistoric component present in the Riverside County area was represented by the Cahuilla, Gabrielino, and Luiseño Indians. (BFSA, 2018, p. 2.0-5) Refer to Section 2.3 of the Project’s cultural resources assessment (*Technical Appendix H*) for a more detailed discussion about the prehistoric cultural periods in Riverside County.

- Late Pleistocene/Paleo Indian Period (11,500 to circa 9,000 Years Before Present [YBP]). The Paleo Indian Period is associated with the terminus of the late Pleistocene (12,000 to 10,000 YBP). The environment during the late Pleistocene was cool and moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands. However, by the terminus of the late Pleistocene, the climate became warmer, which caused the glaciers to melt; sea levels to rise; greater coastal erosion; large lakes to recede and evaporate; extinction of Pleistocene megafauna; and major vegetation changes. The coastal shoreline at 10,000 YBP, depending upon the particular area of the coast, was near the 30-meter isobath, or two to six kilometers further west than its present location. Paleo Indians were likely attracted to multiple habitat types, including mountains, marshlands, estuaries, and lakeshores. These people likely subsisted using a more generalized hunting, gathering, and collecting adaptation utilizing a variety of resources including birds, mollusks, and both large and small mammals. (BFSA, 2018, p. 2.0-6)
- Early and Middle Holocene/Archaic Period (circa 9,000 to 1,300 YBP). Between 9,000 and 8,000 YBP, a widespread complex was established in the southern California region, primarily along the



coast. This complex is locally known as the La Jolla Complex, which is regionally associated with the Encinitas Tradition and shares cultural components with the widespread Milling Stone Horizon. The coastal expression of this complex appeared in the southern California coastal areas and focused upon coastal resources and the development of deeply stratified shell middens that were primarily located around bays and lagoons. The older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of over 7,000 years in this region, beginning over 9,000 YBP. (BFSA, 2018, p. 2.0-6)

The Encinitas Tradition is best recognized for its pattern of large coastal sites characterized by shell middens, grinding tools that are closely associated with the marine resources of the area, cobble-based tools, and flexed human burials. While ground stone tools and scrapers are the most recognized tool types, coastal Encinitas Tradition sites also contain numerous utilized flakes, which may have been used to pry open shellfish. Artifact assemblages at coastal sites indicate a subsistence pattern focused upon shellfish collection and nearshore fishing. This suggests an incipient maritime adaptation with regional similarities to more northern sites of the same period. Other artifacts associated with Encinitas Tradition sites include stone bowls, doughnut stones, discoidals, stone balls, and stone, bone, and shell beads. (BFSA, 2018, p. 2.0-6)

The coastal lagoons in southern California supported large Milling Stone Horizon populations circa 6,000 YBP, as is shown by numerous radiocarbon dates from the many sites adjacent to the lagoons. The ensuing millennia were not stable environmentally, and by 3,000 YBP, many of the coastal sites in central San Diego County had been abandoned. The abandonment of the area is usually attributed to the sedimentation of coastal lagoons and the resulting deterioration of fish and mollusk habitat, a situation well-documented at Batiquitos Lagoon. Over a 2,000-year period at Batiquitos Lagoon, dominant mollusk species occurring in archaeological middens shift from deep-water mollusks (*Argopecten* sp.) to species tolerant of tidal flat conditions (*Chione* sp.), indicating water depth and temperature changes. This situation likely occurred for other small drainages (Buena Vista, Agua Hedionda, San Marcos, and Escondido creeks) along the central San Diego coast where low flow rates did not produce sufficient discharge to flush the lagoons they fed (Buena Vista, Agua Hedionda, Batiquitos, and San Elijo lagoons). Drainages along the northern and southern San Diego coastline were larger and flushed the coastal hydrological features they fed, keeping them open to the ocean and allowing for continued human exploitation. Peñasquitos Lagoon exhibits dates as late as 2,355 YBP and San Diego Bay showed continuous occupation until the close of the Milling Stone Horizon. Additionally, data from several drainages in Camp Pendleton indicate a continued occupation of shell midden sites until the close of the period, indicating that coastal sites were not entirely abandoned during this time. (BFSA, 2018, p. 2.0-7)

By 5,000 YBP, an inland expression of the La Jolla Complex is evident in the archaeological record, exhibiting influences from the Campbell Tradition from the north. These inland Milling Stone Horizon sites have been termed “Pauma Complex.” By definition, Pauma Complex sites share a predominance of grinding implements (manos and metates), lack mollusk remains, have greater tool variety (including atlatl dart points, quarry-based tools, and crescentics), and seem to express a more sedentary lifestyle with a subsistence economy based upon the use of a broad variety of terrestrial resources. Although originally viewed as a separate culture from the coastal La Jolla Complex, it appears that



these inland sites may be part of a subsistence and settlement system utilized by the coastal peoples. Evidence from the 4S Project in inland San Diego County suggests that these inland sites may represent seasonal components within an annual subsistence round by La Jolla Complex populations. Including both coastal and inland sites of this time period in discussions of the Encinitas Tradition, therefore, provides a more complete appraisal of the settlement and subsistence system exhibited by this cultural complex. (BFSA, 2018, p. 2.0-7)

- Late Holocene/Late Prehistoric/San Luis Rey Period (1300 YBP to 1790). Approximately 1,350 YBP, a Shoshonean-speaking group from the Great Basin region moved into Riverside County, marking the transition to the Late Prehistoric Period. This period is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, yet effective, technological innovations. Technological developments during this period included the introduction of the bow and arrow between A.D. 400 and 600 and the introduction of ceramics. Atlatl darts were replaced by smaller arrow darts, including Cottonwood series points. Other hallmarks of the Late Prehistoric Period include extensive trade networks as far-reaching as the Colorado River Basin and cremation of the dead. (BFSA, 2018, pp. 2.0-7 and 2.0-8)
- Late Holocene/Late Protohistoric Period (1790 to Present). Ethnohistoric and ethnographic evidence indicates that three Shoshonean-speaking groups occupied portions of Riverside County including the Cahuilla, the Gabrielino, and the Luiseño. The geographic boundaries between these groups in pre- and protohistoric times are difficult to place, but the Project is located on the border of ethnographic Luiseño and Cahuilla territory. Further ethnographic information for the Luiseño, Cahuilla, and Gabrielino groups is presented in section 2.3.4 of the Project's Cultural Resources Assessment (*Technical Appendix H*). (BFSA, 2018, p. 2.0-8)

2. *Historic Setting*

European exploration along the California coast began in 1542 when Juan Rodriguez Cabrillo and his men landed at San Diego Bay. Sixty years after the Cabrillo expeditions, an expedition under Sebastian Viscaíno made an extensive and thorough exploration of the Pacific coast. Although the voyage did not extend beyond the northern limits of the Cabrillo track, Viscaíno had the most lasting effect on the nomenclature of the coast. Many of the names he gave to various locations have survived, whereas practically every one of the names given by Cabrillo has faded from use. The early European voyages observed Native Americans living in villages along the coast but did not make any substantial, long-lasting impact. At the time of contact, the Luiseño population was estimated to have ranged from 4,000 to as many as 10,000 individuals. (BFSA, 2018, p. 2.0-9)

The historic background of the Project area began with the Spanish colonization of Alta California. The first Spanish colonizing expedition reached southern California in 1769 with the intention of converting and civilizing the indigenous populations, as well as expanding the knowledge of and access to new resources in the region. In the late eighteenth century, the San Gabriel (Los Angeles County), San Juan Capistrano (Orange County), and San Luis Rey (San Diego County) missions began colonizing southern California and gradually expanded their use of the interior valley (into what is now western Riverside County) for raising grain and



cattle to support the missions. The San Gabriel Mission claimed lands in what is now Jurupa, Riverside, San Jacinto, and the San Gorgonio Pass, while the San Luis Rey Mission claimed land in what is now Lake Elsinore, Temecula, and Murrieta. The indigenous groups who occupied these lands were recruited by missionaries, converted, and put to work in the missions. Throughout this period, the Native American populations were decimated by introduced diseases, a drastic shift in diet resulting in poor nutrition, and social conflicts due to the introduction of an entirely new social order. (BFSA, 2018, p. 2.0-9)

In the mid- to late 1770s, Juan Bautista de Anza passed through much of Riverside County while searching for an overland route from Sonora, Mexico to San Gabriel and Los Angeles, describing fertile valleys, lakes, and sub-desert areas. In 1797, Father Presidente Lausen, Father Norberto de Santiago, and Corporal Pedro Lisalde led an expedition from Mission San Juan Capistrano through southwestern Riverside County in search of a new mission site before constructing Mission San Luis Rey in northern San Diego County. While no missions were ever built in what would become Riverside County, many mission outposts, or *asistencias*, were established in the early years of the nineteenth century to extend the missions' influence to the backcountry. Two outposts located in Riverside County include San Jacinto and Temecula. (BFSA, 2018, p. 2.0-9)

Mexico gained independence in 1822 and desecularized the missions in 1832, signifying the end of the Mission Period. By this time, the missions owned much of the land in California, and the new government began distributing the vast mission holdings to wealthy and politically connected Mexican citizens. The "grants" were called "ranchos," of which Jurupa, El Rincon, La Sierra, El Sobrante de San Jacinto, La Laguna (Lake Elsinore), Santa Rosa, Temecula, Pauba, San Jacinto Nuevo y Potrero, and San Jacinto Viejo were located in present-day Riverside County. The first grant in present-day Riverside County, Rancho Jurupa, was given to Juan Bandini in 1838. These ranchos were all located in the valley environments typical of western Riverside County. (BFSA, 2018, pp. 2.0-9 and 2.0-10)

In 1846, war erupted between Mexico and the United States. In 1848, with the signing of the Treaty of Guadalupe Hidalgo, the region was annexed as a territory of the United States, leading to California becoming a state in 1850. These events generated a steady flow of settlers into the area, including gold miners, entrepreneurs, health-seekers, speculators, politicians, adventurers, seekers of religious freedom, and individuals desiring to create utopian colonies. In early 1852, the Native Americans of southern Riverside County, including the Luiseño and the Cahuilla, thought they had signed a treaty resulting in their ownership of all lands from Temecula to Aguanga east to the desert, including the San Jacinto Valley and the San Gorgonio Pass. The Temecula Treaty also included food and clothing provisions for the Indians. However, Congress never ratified the treaties, and the promise of one large reservation was rescinded. (BFSA, 2018, p. 2.0-10)

With the completion of the transcontinental railroad in 1869, land speculators, developers, and colonists began to invest in southern California. The first colony in what was to become Riverside County was Riverside itself. Judge John Wesley North, an abolitionist from Tennessee, brought a group of associates and co-investors out to southern California and founded Riverside on part of the Jurupa Rancho. A few years after, the navel orange quickly became the agricultural staple of the region. By the late 1880s and early 1890s, there was growing discontent between Riverside and San Bernardino, its neighbor 10 miles to the north, due to differences in opinion concerning religion, morality, the Civil War, politics, and fierce competition to attract settlers. After



a series of instances in which charges were claimed about unfair use of tax monies to the benefit of the City of San Bernardino only, several people from Riverside decided to investigate the possibility of a new county. In May of 1893, voters living within portions of San Bernardino County (to the north) and San Diego County (to the south) approved the formation of Riverside County. Early business opportunities were linked to the agriculture industry but commerce, construction, manufacturing, transportation, and tourism also provided a healthy local economy. By the time of Riverside County's formation, Riverside had grown to become the wealthiest city per capita in the country due to the successful cultivation of the navel orange. (BFSA, 2018, p. 2.0-10 and 2.0-11)

The region of Lake Elsinore started to develop in 1883 with the emergence of the railroad. The railroad brought a steady stream of settlers, miners, and prospectors into the area, thereby creating the community of Lake Elsinore. By 1884, the developing town had a school and post office established, and in 1893, the town officially became recognized as the City of Lake Elsinore. In the late nineteenth century, the town experienced a boom due to the mining of gold between the towns of Elsinore and nearby Perris. The most prosperous mine was Good Hope Mine, which produced over \$2 million worth of gold. In addition to the mining of gold, Lake Elsinore is known for the mining of tin ore, coal, clay, and asbestos. Following the mining boom, Lake Elsinore began to bring in many tourists due to boat and auto racing and the lakefront resorts. The earliest attraction of Lake Elsinore was the legendary Crescent Bathhouse, which was built in 1923. The bathhouse was declared a National Historic Place on July 30, 1975. In 1932, the Ortega Highway was opened, as well as the airport, continuing to bring people into the city. The Great Depression limited expansion, except for the completion of a new post office in 1932. (BFSA, 2018, p. 2.0-11)

B. Documented Prehistoric Resources

Brian F. Smith and Associates conducted an archaeological assessment of the Project site to identify the presence or absence of cultural resources. Testing to determine site significance included a records search, a Sacred Lands Records Search, a focused survey, and subsurface testing (advancing a series of shovel test pits [STPs]) (BFSA, 2018, pp. 1.0-1 and 1.0-2). The study resulted in the identification of one (1) prehistoric resource, which was previously unrecorded. During the 2017 survey of the property, BFSA confirmed the presence of prehistoric resource Site P-33-026830 at the Project site and conducted additional significance testing. The prehistoric resource site identified at the Project site is listed below.

- **Site P-33-026830:** Isolate P-33-026830 was identified on March 22, 2017 by BFSA archaeologists as two (2) prehistoric lithic flakes. Isolate P-33-026830 is located in the northeastern portion of the area of potential effect (APE). The area surrounding P-33-026830 has been disturbed by agricultural discing. Vegetation present during testing was minimal, which allowed for excellent surface visibility. Two (2) volcanic flakes were recovered from the surface of P-33-026830 although a shovel test conducted at the site was negative. P-33-026830 lacks intact subsurface deposit and the ability to provide any future research potential; therefore, P-33-026830 is being evaluated as not significant under CEQA. (BFSA, 2018, p. 4.0-32 and 4.0-34)



C. Historic Period Resources

Brian F. Smith and Associates conducted a records search, field survey, and subsurface testing of the Project site to identify the presence or absence of historic resources on the Project site. One (1) historic site (Site RIV-8120) was identified within the Project boundaries, which is summarized below.

- **Site RIV-8120:** This is a historic refuse scatter comprising 12 artifact concentrations that was identified during a 2006 survey. BFSa archaeologists re-identified the site during the Phase I archaeological survey in the northwestern portion of the APE. This site is bounded by a large southwest trending drainage to the east and Nichols Road to the north, and likely developed as a result of roadside trash dumping that is still occurring within the Project area. At the time of the Phase II field effort, nearly half of the site had been cleared and graded for the placement of a water tank. Additionally, the remainder of Site RIV-8120 was disturbed by repeated agricultural discing. Because of this disturbance, the boundaries of the artifact locations as defined in a previous study (Lerch and Gray, 2006) have been spread throughout the site area, resulting in the identification of a total of 20 surface collection areas (or artifact concentrations). Vegetation at the site during testing was minimal, which allowed for excellent surface visibility. Consumer cans, bottles, and household refuse deposited between the 1930s and 1950s were identified on the surface of the site. (BFSa, 2018, p. 4.0-12) Site RIV-8120 lacks an intact subsurface deposit and the ability to provide any future research potential; therefore, Site RIV-8120 is evaluated as not significant under CEQA. (BFSa, 2018, p. 4.0-26)

4.8.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations governing the protection of cultural and tribal cultural resources.

A. Federal Regulations

1. National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) was passed primarily to acknowledge the importance of protecting our nation's heritage. While Congress recognized that national goals for historic preservation could best be achieved by supporting the drive, enthusiasm, and wishes of local citizens and communities, it understood that the Federal Government must set an example through enlightened policies and practices. In the words of the Act, the Federal Government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and "foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony." (NPS, 2018c)

NHPA and related legislation sought a partnership among the Federal Government and the States that would capitalize on the strengths of each. The Federal Government, led by the National Park Service (NPS) provides funding assistance; basic technical knowledge and tools; and a broad national perspective on America's heritage. The States, through State Historic Preservation Officers (SHPOs) appointed by the Governor of each State, would provide matching funds, a designated State office, and a statewide preservation program tailored to State and local needs and designed to support and promote State and local historic preservation interests and priorities. (NPS, 2018c)



An Advisory Council on Historic Preservation, the first and only Federal entity created solely to address historic preservation issues, was established as a cabinet-level body of Presidentially-appointed citizens, experts in the field, and Federal, State, and local government representatives, to ensure that private citizens, local communities, and other concerned parties would have a forum for influencing federal policy, programs, and decisions as they impacted historic properties and their attendant values. (NPS, 2018c)

Section 106 of NHPA granted legal status to historic preservation in federal planning, decision-making, and project execution. Section 106 requires all federal agencies to take into account the effects of their actions on historic properties and provide ACHP with a reasonable opportunity to comment on those actions and the manner in which Federal agencies are taking historic properties into account in their decisions. (NPS, 2018c)

A number of additional executive and legislative actions have been directed toward improving the ways in which all federal agencies manage historic properties and consider historic and cultural values in their planning and assistance. Executive Order 11593 (1971) and, later, Section 110 of NHPA (1980, amended 1992), provided the broadest of these mandates, giving federal agencies clear direction to identify and consider historic properties in federal and federally assisted actions. The National Historic Preservation Amendments of 1992 further clarified Section 110 and directed federal agencies to establish preservation programs commensurate with their missions and the effects of their authorized programs on historic properties.

2. *National Register of Historic Places (NRHP)*

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the NPS's National Register of Historic Places (NRHP) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archaeological resources. (NPS, n.d.)

To be considered eligible, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance, as follows:

- **Age and Integrity.** Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?
- **Significance.** Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archaeological investigation about our past? (NPS, n.d.)

Nominations can be submitted to a SHPO from property owners, historical societies, preservation organizations, governmental agencies, and other individuals or groups. The SHPO notifies affected property owners and local governments and solicits public comment. If the owner (or a majority of owners for a district nomination) objects, the property cannot be listed but may be forwarded to the National Park Service (NPS) for a Determination of Eligibility (DOE). Listing in the National Register of Historic Places provides formal recognition of a property's historical, architectural, or archaeological significance based on national standards used by every state. (NPS, n.d.)



Under Federal Law, the listing of a property in the National Register places no restrictions on what a non-federal owner may do with their property up to and including destruction, unless the property is involved in a project that receives federal assistance, usually funding or licensing/permitting. National Register listing does not lead to public acquisition or require public access. (NPS, n.d.)

3. *National Historic Landmarks Program*

National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, just over 2,500 historic places bear this national distinction. Working with citizens throughout the nation, the National Historic Landmarks Program draws upon the expertise of National Park Service staff who guide the nomination process for new Landmarks and provide assistance to existing Landmarks. (NPS, 2017a)

4. *American Indian Religious Freedom Act*

The American Indian Religious Freedom Act (AIRFA) requires each executive branch agency with statutory or administrative responsibility for the management of federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies also are required to maintain the confidentiality of sacred sites. Each executive branch agency with statutory or administrative responsibility for the management of federal lands are required to implement procedures to ensure reasonable notice is provided of proposed actions or land management policies that may restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

5. *Native American Graves Protection and Repatriation Act (NAGPRA)*

The Native American Graves Protection and Repatriation Act (NAGPRA; Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statute as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. (NPS, 2018a)

One major purpose of this statute is to require that federal agencies and museums receiving Federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items. The agencies and museums must consult with Indian Tribes and Native Hawaiian organizations to attempt to reach agreements on the repatriation or other disposition of these remains and objects. Once lineal descent or cultural affiliation has been established, and in some cases the right of possession also has been demonstrated, lineal descendants, affiliated Indian Tribes, or affiliated Native Hawaiian organizations normally make the final determination about the disposition of cultural items. Disposition may take many forms from reburial to long term curation, according to the wishes of the lineal descendent(s) or culturally affiliated Tribe(s). (NPS, 2018a)



The second major purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on Federal and tribal lands. NAGPRA requires that Indian tribes or Native Hawaiian organizations be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archaeological Resources Protection Act. This NAGPRA requirement is likely to encourage the in-situ preservation of archaeological sites, or at least the portions of them that contain burials or other kinds of cultural items. (NPS, 2018a)

Other provisions of NAGPRA: (1) stipulate that illegal trafficking in human remains and cultural items may result in criminal penalties; (2) authorizes the Secretary of the Interior to administer a grants program to assist museums and Indian Tribes in complying with certain requirements of the statute; (3) requires the Secretary of the Interior to establish a Review Committee to provide advice and assistance in carrying out key provisions of the statute; (4) authorizes the Secretary of the Interior to penalize museums that fail to comply with the statute; and, (5) directs the Secretary to develop regulations in consultation with this Review Committee. (NPS, 2018a)

6. *Federal Antiquities Act*

The Antiquities Act is the first law to establish that archaeological sites on public lands are important public resources. It obligates federal agencies that manage the public lands to preserve for present and future generations the historic, scientific, commemorative, and cultural values of the archaeological and historic sites and structures on these lands. It also authorizes the President to protect landmarks, structures, and objects of historic or scientific interest by designating them as National Monuments. (NPS, 2018b)

B. State Regulations

1. *California Administrative Code, Title 14, Section 4308*

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: “No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value.”

2. *California Code of Regulations Title 14, Section 1427*

California Code of Regulations Title 14, Section 1427 provides that: “No person shall collect or remove any object or thing of archaeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location or context in which the object or thing of archaeological or historical interest or value is found.”

3. *California Register of Historic Resources*

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archaeological resources. The California Register program encourages public recognition and protection of resources of architectural,



historical, archaeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA. (OHP, n.d.)

In order for a resource to be included on the Register of Historic Resources, the resources must meet one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).
- Associated with the lives of persons important to local, California or national history (Criterion 2).
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values (Criterion 3).
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4). (OHP, n.d.)

For resources included on the Register of Historic Resources, environmental review may be required under CEQA if property is threatened by a project. Additionally, local building inspectors must grant code alternatives provided under State Historical Building Code. Further, the local assessor may enter into contract with property owner for property tax reduction pursuant to the Mills Act. A property owner also may place his or her own plaque or marker at the site of the resource. (OHP, n.d.)

Consent of owner is not required, but a resource cannot be listed over an owner's objections. The State Historical Resources Commission (SHRC) can, however, formally determine a property eligible for the California Register if the resource owner objects. (OHP, n.d.)

4. *Traditional Tribal Cultural Places Act (Senate Bill 18, "SB 18")*

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. SB 18 also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. (OPR, 2005)

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government. (OPR, 2005)

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 *et seq.*) and specific plans (defined in Government Code § 65450 *et seq.*). Although SB 18 does not specifically



mention consultation or notice requirements for adoption or amendment of specific plans, existing state planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment. (OPR, 2005)

5. *Assembly Bill 52 (AB 52)*

The legislature added new requirements regarding tribal cultural resources in Assembly Bill 52 (AB 52). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2015)

The Public Resources Code now establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2015)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 21084.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a notice of preparation for an environmental impact report or negative declaration or mitigated negative declaration filed on or after July 1, 2015. (OPR, 2015)

§ 21074 of the Public Resources Code defines “tribal cultural resources.” In brief, in order to be considered a “tribal cultural resource,” a resource must be either:

- (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
- (2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2015)

In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2015)



6. State Health and Safety Code

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease “In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery...” until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. § 7051 specifies that the removal of human remains from “internment or a place of storage while awaiting internment” with the intent to sell them or to dissect them with “malice or wantonness” is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 establish the California Native American Graves Protection and Repatriation Act consistent with the federal law addressing the same. The Act stresses that “all California Indian human remains and cultural items are to be treated with dignity and respect.” It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims.

7. California Code of Regulations Section 15064.5

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archaeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 *et seq.*).
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
 - Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - Is associated with the lives of persons important in our past;



- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - Has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

C. Local Regulations

1. City of Lake Elsinore General Plan

The City of Lake Elsinore General Plan, Chapter 4, *Resource Protection and Preservation*, addresses resource protection and preservation issues related to biological resources, open space, water resources, cultural and paleontological resources, and aesthetics resources. Section 4.6.8, *Cultural and Paleontological Resource Goals, Policies, and Implementation Programs*, and Section 4.7.3, *Historical Preservation Goals, Policies and Implementation Programs*, details policies, implementation programs, and responsible agencies and departments in support of the following goals regarding cultural resources:

- Goal 6: Preserve, protect, and promote the cultural heritage of the City and surrounding region for the education and enjoyment of all City residents and visitors, as well as for the advancement of historical and archaeological knowledge.
- Goal 7: Support state-of-the-art research designs and analytical approaches to archaeological and cultural resource investigations while also acknowledging the traditional knowledge and experience of the Native American tribes regarding Native American culture.
- Goal 9: Assure the recognition of the City's heritage through preservation of the City's significant historical sites and structures.
- Goal 10: Encourage the preservation, protection, and restoration of historical and cultural resources.

4.8.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to historic or archaeological resources if the Project or any Project-related component would:

- a. *Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;*
- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or*
- c. *Disturb any human remains, including those interred outside of formal cemeteries.*



The above-listed thresholds are derived directly from Section V of Appendix G to the CEQA Guidelines and address typical adverse effects to cultural resources. (OPR, 2018)

4.8.4 IMPACT ANALYSIS

Threshold a: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Under existing conditions, the Project site is undeveloped and there are no structures located on-site. According to the City of Lake Elsinore General Plan EIR, there are no known historical sites on the Project site. As shown on Figure 3.2-2 of the General Plan EIR, the nearest historical site to the Project site is located approximately 1.5 miles southwest of the Project site. (Lake Elsinore, 2011, Figure 3.2-2) Additionally, the northern 45.4 acres of the Project site are currently undergoing reclamation activities pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2).

A site-specific Cultural Resources Assessment (*Technical Appendix H*) was prepared for the Project. As described under Subsection 4.8.1C of the Cultural Resources Assessment, one (1) historical resource was identified at the Project site, Site RIV-8120. This historical resource consists of a historic trash scatter composed of 12 refuse concentrations on the northwest corner of the Project site that was possibly used throughout 1930 to 1960 for roadside trash dumping. Site RIV-8120 contains no associated structures or features. Significance testing on Site RIV-8120 revealed a total of 480 subsurface concentrations of historic artifacts; however, due to a lack of unique elements, and according to the criteria listed in CEQA Guidelines § 15064.5, BFSa concluded that Site RIV-8120 is not a significant historical resource (BFSa, 2018, pp. 1.0-1 and 4.0-26). There are no other historical resources present on the Project site. However, there is a possibility that historical resources may be present beneath the site's surface and may be impacted by future ground-disturbing construction activities associated with the Project. Pursuant to California Code of Regulations, § 15064.5, this is a potentially significant impact for which mitigation would be required.

Threshold b: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

As described under Subsection 4.8.1C, the Project's Cultural Resources Assessment (*Technical Appendix H*) identified one (1) archaeological resource site at the Project site, Site P-33-026830. Based on the results of the significance testing conducted by BFSa (refer to *Technical Appendix H*), P-33-011259 does not comprise a significant archaeological resource pursuant to the criteria given in CEQA Guidelines § 15064.5. CEQA Guidelines § 15064.5 states that an archaeological resource would be significant if the resource met the criteria stated in Public Resources Code Section 21083.2 which states that a resource would be significant if it meets any of the following criteria: contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; has a special and particular quality such as being the oldest of its type or the best available example of its type; is directly associated with a scientifically recognized important prehistoric or historic event or person (CA Public Resources Code Section 21083.2).



Significance testing via shovel excavation on Site P-33-026830 demonstrated that P-33-026830 consists of two (2) volcanic flakes with no associated artifacts. Because no diagnostic artifacts were discovered at this site, no definite cultural affiliation could be assigned to the resource. Furthermore, significance testing determined that the site exhibits no artifacts, artifact assemblages, or subsurface features. (BFSA, 2018, p. 4.0-34) Thus, the significance testing for Site P-33-026830 determined that the site does not qualify as a significant archaeological resource under any of the stated criteria listed in CEQA Guidelines § 15064.5. Accordingly, the Project's impacts to archaeological resources would be less than significant and no mitigation is required.

Regardless, there is a possibility that archaeological resources may be present beneath the site's subsurface and may be impacted by future ground-disturbing construction activities associated with the Project. Due to the potential to discover significant archaeological resources within the Project boundaries, which could be significantly impacted if not properly identified and treated, a potentially significant impact to subsurface archaeological resources would occur, and mitigation would be required. (BFSA, 2018, p. 1.0-3)

Threshold c: Would the Project disturb any human remains, including those interred outside of formal cemeteries?

The Project site does not contain a cemetery and no known cemeteries are located within the immediate site vicinity. Field surveys conducted on the Project site by BFSA did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site. (BFSA, 2018, p. 3.0-4) Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction.

If human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code, § 7050.5, "Disturbance of Human Remains." According to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. With mandatory compliance to California Health and Safety Code § 7050.5 and Public Resources Code § 5097.98, any potential impacts to human remains, including human remains of Native American descent, would be less than significant and mitigation is not required. (BFSA, 2018, p. 3.0-7)



4.8.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site.

As noted above under Threshold a, the Project site contains one (1) historical resource (Site RIV-8120). Site RIV-8120 was found not to be significant under CEQA criteria. Regardless, there is a potential that historical resources meeting the CEQA definition of a significant resource may be buried beneath the surface and unearthed during the Project's construction activities. Impact to such resources have the potential to be significant if they are not properly identified and treated. In addition, other cumulative developments could have the potential to result in impacts to known and/or previously-undiscovered historical resources. As such, the Project would result in a cumulatively-considerable impact to historical resources and requires mitigation.

As noted above under Threshold b, the Project site contains one (1) previously documented archaeological resource (Site P-33-026830). Significance testing determined no subsurface artifact concentrations at Site P-33-026830; thus, Site P-33-026830 would not be significant under CEQA criteria. Accordingly, the Project would not impact any known archaeological resources that are significant under CEQA Guidelines criteria. Regardless, there is a potential that archaeological resources meeting the CEQA definition of a significant resource may be buried beneath the surface and unearthed during the Project's construction activities. Impacts to such resources have the potential to be significant if they are not properly identified and treated. Other cumulative developments also could have the potential to result in impacts to known and/or previously-undiscovered archaeological resources. Thus, the Project's potential impacts to significant archaeological resources, should such resources be unearthed during the Project's ground-disturbing construction activities, would be cumulatively considerable and require mitigation.

As discussed under Threshold c, due to mandatory compliance with the provisions of California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 *et. seq.*, any human remains encountered during ground disturbing activities would be treated in an appropriate manner. Because other development projects within the region similarly would be required to comply with state law, any cumulative impact associated with human remains discovery would be less than significant.

4.8.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds a: Significant Direct and Cumulatively-Considerable Impact. The Project site would impact one (1) known historical resource (Site RIV-8120) on the Project site. However, Site RIV-8120 is not determined significant pursuant to the criteria given in CEQA Guidelines § 15064.5. Also, there are no other known archaeological resources at the Project site. Accordingly, the Project would result in less-than-significant impacts to known significant historical resources. Regardless, there is a potential that historical resources may be buried beneath the surface of the site that meet the CEQA definition of a significant resource which could not be unearthed during the Project's construction process. If such resources are unearthed and are not properly identified and treated, the impact would be significant on both a direct and cumulative basis. Mitigation is required to address these potential impacts.



Thresholds b: Significant Direct and Cumulatively-Considerable Impact. As noted above under Threshold b, the Project site contains one (1) archaeological resource (Site P-33-026830). However, Site P-33-026830 is not determined significant pursuant to the criteria given in CEQA Guidelines § 15064.5. Accordingly, the Project would result in less-than-significant impacts to known significant archaeological resources. Regardless, there is a potential that archaeological resources may be buried beneath the surface of the site that meet the CEQA definition of a significant resource which could be unearthed during the Project's construction process. If such resources are unearthed and are not properly identified and treated, the impact would be significant. Mitigation is required to address these potential impacts.

Threshold c: Less-than-Significant Impact. The Project site does not contain a cemetery and no known cemeteries are located within the immediate site vicinity. In the unlikely event that human remains are discovered during Project grading or other ground-disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 *et. seq.* Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.

4.8.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

The following mitigation measures are required to reduce to below a level of significance the Project's potential impact to archaeological and historical resources that have the potential to be present beneath the Project site and discovered during ground-disturbing construction activities.

MM 4.8-1 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:

1. All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted until a meeting is convened between the developer, the Project Archaeologist, the Native American tribal representative(s) from consulting tribes (or other appropriate ethnic/cultural group representative), and the Community Development Director or their designee to discuss the significance of the find.
2. The developer shall call the Community Development Director or their designee immediately upon discovery of the cultural resource to convene the meeting.
3. At the meeting with the aforementioned parties, the significance of the discoveries shall be discussed and a decision is to be made, with the concurrence of the Community Development Director or their designee, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resource.
4. Further ground disturbance shall not resume within the area of the discovery until a meeting has been convened with the aforementioned parties and a decision is made, with the concurrence of the Community Development Director or their designee, as to the appropriate mitigation measures.



- MM 4.8-2 Archaeologist/CRMP. Prior to issuance of grading permits, the applicant/developer shall provide evidence to the Community Development Department that a Secretary of Interior Standards qualified and certified Registered Professional Archaeologist (RPA) has been contracted to implement a Cultural Resource Monitoring Program (CRMP) that addresses the details of all activities that must be completed and procedures that must be followed regarding cultural resources associated with this project. The CRMP document shall be provided to the Community Development Director or their designee for review and approval prior to issuance of the grading permit. The CRMP provides procedures to be followed and are to ensure that impacts on cultural resources will not occur without procedures that would reduce the impacts to less than significant. These measures shall include, but shall not be limited to, the following:
- Archaeological Monitor: An adequate number of qualified 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, in consultation with the Tribal monitor.
 - Cultural Sensitivity Training: The Project Archaeologist and a representative designated by the consulting Tribe(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all Construction Personnel. Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event unanticipated cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. This is a mandatory training and all construction personnel must attend prior to beginning work on the project site. A sign-in sheet for attendees of this training shall be included in the Phase IV Monitoring Report.
 - Unanticipated Resources: In the event that previously unidentified potentially significant cultural resources are discovered, the Archaeological and/or Tribal Monitor(s) shall have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The Project Archaeologist, in consultation with the Tribal monitor(s) shall determine the significance of the discovered resources. The Community Development Director or their designee must concur with the evaluation before construction activities will be allowed to resume in the affected area. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods.



- Cultural Resources Disposition: In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the Community Development Department:

1. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.
2. Relocation of the resources on the Project property. The measures for relocation shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts by means of a deed restriction or other form of protection (e.g., conservation easement) in order to demonstrate avoidance in perpetuity.

Relocation shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

3. If relocation is not agreed upon by the Consulting Tribes then the resources shall be curated at a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.

- Phase IV Report: A final archaeological report shall be prepared by the Project archaeologist and submitted to the Community Development Director or their designee prior to grading final. The report shall follow County of Riverside requirements and shall include at a minimum: a discussion of the monitoring methods and techniques used; the results of the monitoring program including any artifacts recovered; an inventory of any



resources recovered; updated DPR forms for all sites affected by the development; final disposition of the resources including GPS data; artifact catalog and any additional recommendations. A final copy shall be submitted to the City, Project Applicant, the Eastern Information Center (EIC), and the Tribe.

- MM 4.8-3 Cultural Resources Disposition: In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the Community Development Department:

1. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.
2. Relocation of the resources on the Project property. The measures for relocation shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts by means of a deed restriction or other form of protection (e.g., conservation easement) in order to demonstrate avoidance in perpetuity.

Relocation shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

3. If relocation is not agreed upon by the Consulting Tribes then the resources shall be curated at a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.

- MM 4.8-4 Tribal Monitoring. Prior to the issuance of a grading permit, the applicant shall contact the consulting Native American Tribe(s) that have requested monitoring through consultation with the City during the AB 52 and/or the SB 18 process ("Monitoring Tribes"). The applicant shall



coordinate with the Tribe(s) to develop individual Tribal Monitoring Agreement(s). A copy of the signed agreement(s) shall be provided to the City of Lake Elsinore Community Development Department, Planning Division prior to the issuance of a grading permit. The Agreement shall address the treatment of any known tribal cultural resources (TCRs) including the project's approved mitigation measures and conditions of approval; the designation, responsibilities, and participation of professional Tribal Monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains/burial goods discovered on the site per the Tribe(s) customs and traditions and the City's mitigation measures/conditions of approval. The Tribal Monitor will have the authority to stop and redirect grading in the immediate area of a find in order to evaluate the find and determine the appropriate next steps, in consultation with the Project Archaeologist.

- MM 4.8-5 Phase IV Report. Upon completion of the implementation phase, 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 County 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.
- MM 4.8-6 Discovery of Human Remains. In the event that human remains (or remains that may be human) are discovered at the project site during grading or earthmoving, the construction contractors, project archaeologist and/or designated Native American Monitor shall immediately stop all activities within 100 feet of the find. The project applicant shall then inform the Riverside County Coroner and the City of Lake Elsinore Community Development Department immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains and that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. If human remains are determined to be Native American, the applicant shall comply with the state law relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (PRC Section 5097). The coroner shall contact the NAHC within 24 hours and the NAHC will make the determination of most likely descendant(s). The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. In the event that the applicant and the MLD are in disagreement regarding the disposition of the remains. State law will apply and the mediation process will occur with the NAHC, if requested (see PRC Section 5097.98(e) and 5097.94(k)).



According to the California Health and Safety Code, six or more human burial at one location constitutes a cemetery (Section 81 00), and disturbance of Native American cemeteries is a felony (Section 7052).

- MM 4.8-7 Non-Disclosure of Reburial Location. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254(r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).

4.8.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a: Less-than-Significant Impact with Mitigation. Implementation of the Project would impact historical resources on the Project site that may be uncovered during grading activities. Compliance with the Applicable City Regulations and Design Requirements, as well as Mitigation Measures MM 4.8-1 through MM 4.8-7, would ensure that a qualified Project Archaeologist and Tribal Monitors present on-site during ground-disturbing activities and would ensure that any archaeological resources that may be uncovered are appropriately treated as recommended by the Project Archaeologist in consultation with the Tribal Monitors.

Threshold b: Less-than-Significant Impact with Mitigation. Implementation of the Project would impact archaeological resources on the Project site that may be uncovered during grading activities. Compliance with the Applicable City Regulations and Design Requirements, as well as Mitigation Measures MM 4.8-1 through MM 4.8-7 would ensure that a qualified Project Archaeologist and Tribal Monitors are present on-site during ground disturbing activities and would ensure that any archaeological resources that may be uncovered are appropriately treated as recommended by the Project Archaeologist in consultation with the Tribal Monitors.



4.9 HYDROLOGY AND WATER QUALITY

The following analysis is based on a study entitled “Preliminary Drainage Report for Tract 37305 Nichols South Specific Plan City of Lake Elsinore” prepared by K&A Engineering, Inc. and dated July 2018. The Drainage Report is included in this EIR as *Technical Appendix II* (K&A, 2018a). Analysis in this Subsection also is based on a Preliminary Water Quality Management Plan (WQMP) titled “Preliminary Specific Water Quality Management Plan” prepared by K&A Engineering, Inc. and dated November 2018. The WQMP is included in this EIR as *Technical Appendix I2* (K&A, 2018b).

4.9.1 EXISTING CONDITIONS

A. Regional Hydrology

The Project site is located within the Santa Ana River watershed, which drains a 2,650 square-mile area and is the principal surface flow water body within the region. The Santa Ana River rises in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The total length of the Santa Ana River and its major tributaries is approximately 700 miles (SAWPA, 2014, Ch. 3). The Project site’s location within the Santa Ana River Watershed is depicted on Figure 4.9-1, *Santa Ana River Watershed Map*. The Project site is within the Terra Cotta Hydrologic Subarea of the Lake Mathews Hydrologic Area of the Santa Ana River Hydrologic Unit (RWQCB, 2011, p. 4-33).

B. Site Hydrology

The Project site currently consists of vacant, undeveloped land. Topography of the Project site is characterized by relatively flat terrain with elevations ranging from approximately 1,294 feet above mean sea level (amsl) in the southwestern portion of the site to approximately 1,370 feet amsl in the eastern portion of the site; however, following reclamation elevations on-site will range from 1,294 to 1,323 feet amsl. Stovepipe Creek bisects the Project site from the east, and enters the Project site via two 24-inch pipes over a concrete spillway and exits the Project site along the westerly Project boundary via an existing Caltrans 6’x14’ reinforced concrete box (RCB) culvert. (Google Earth, 2016; K&A, 2018a, p. 5)

The Project-specific Drainage Report (EIR *Technical Appendix II*) identifies four (4) existing drainage areas in the Project area under existing conditions (Drainage Areas A, B, C, and D) as depicted on Figure 4.9-2, *Existing On-Site Drainage Conditions*. A description of the four drainage areas present under existing conditions is presented below (K&A, 2018a, p. 5):

- **Drainage Area A** comprises approximately 837.7 acres and mostly consists of lands located off-site to the north and northeast. Flows from these areas are conveyed towards Stovepipe Creek, which enters the Project site near the eastern boundary via two existing 24” pipes and over a concrete spillway. Stovepipe Creek traverses the Project site in a northeast-to-southwest orientation, and exits the site along the western property line via an existing Caltrans 6’x14’ RCB culvert. (K&A, 2018a, p. 5)

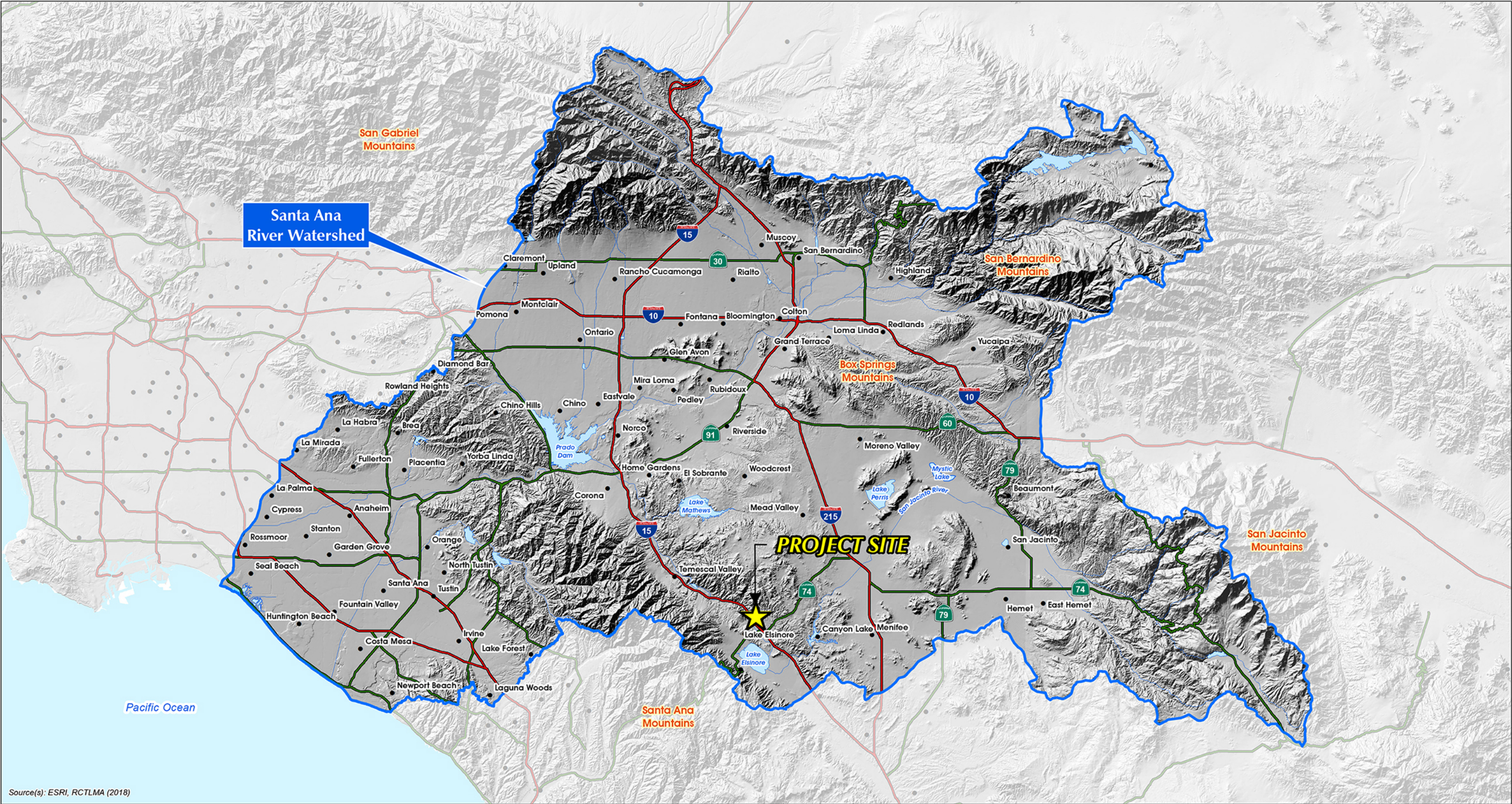
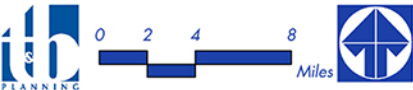
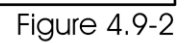


Figure 4.9-1



SANTA ANA RIVER WATERSHED MAP





- **Drainage Area B** is approximately 8.4 acres in size and encompasses the southeast portion of the Project site, and conveys flows to existing drainage facilities within El Toro Road. (K&A, 2018a, p. 5)
- **Drainage Area C** is approximately 47.8 acres and encompasses the northwestern portion of the Project site. Drainage Area C conveys flows to the existing 24" Caltrans culverts along the Nichols Road/I-15 off-ramp. (K&A, 2018a, p. 5)
- **Drainage Area D** is approximately 25.9 acres and encompasses areas off-site to the north and that are tributary to the portions of Nichols Road that are proposed for improvement by the Project. (K&A, 2018a, p. 5)

C. Flood Hazards

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C2928G, dated August 28, 2008, the majority of the portions of the Project site that are proposed for development are not within a 100-year flood hazard area. The only portion of the Project site located within the 100-year flood hazard area is Stovepipe Creek, which traverses the Project site in a northeast-to-southwest orientation. Stovepipe Creek is located within 'Zone A' of the FEMA FIRM, which indicates that no base flood elevations have been determined, but that the area is within the special flood hazard areas subject to inundation by the 100-year flood. (FEMA, 2008)

The Project site is located approximately 1.7 miles north of a levee associated with Lake Elsinore, and 4.7 miles northwest of the Railroad Canyon Dam. According to the City of Lake Elsinore General Plan EIR, the Project site is located outside of the portion of the City of Lake Elsinore that are subject to inundation in the event of a failure of the Railroad Canyon Dam, which is located northeasterly of the City of Lake Elsinore in the City of Canyon Lake. If a catastrophic failure were to occur at the dam, the water would flow into the San Jacinto River and Lake Elsinore, flooding the portion of the City located southwest of Lakeshore Drive, southeast of Riverside Drive (SR-74), northeast of Grand Avenue, and northwest of Corydon Street. (Lake Elsinore, 2011b, p. 3.9-35). Notwithstanding, and in recognition of the possibility of dam inundation, the Public Safety and Welfare Chapter of the Lake Elsinore General Plan includes the following Policy and Implementation Plan that are specifically intended to minimize the risk of injury and residents and visitors, and property damage due to flooding.

- Policy 5.1: Continue to ensure that new construction in floodways and floodplains conforms to all applicable provisions of the National Flood Insurance Program in order to protect buildings and property from flooding. (Lake Elsinore, 2011a, p. 3-14)
- Implementation Program: Through the project review and the CEQA processes the City shall assess new development and reuse applications for potential flood hazards, and shall require compliance with FEMA Special Flood Hazard Areas where appropriate. (Lake Elsinore, 2011a, p. 3-14)

The Project site is subject to the above-referenced regulations and policies regarding dam inundation.

D. Water Quality

The Project site is located within the jurisdiction of the Santa Ana Basin Regional Water Quality Control Board (RWQCB). The receiving waters of flows from the Project site include Stovepipe Creek, Temescal Canyon Reach 5/6, Santa Ana River Reach 3, and Santa Ana River Reach 2 (K&A, 2018b, p. 3). The following receiving water of flows from the Project site are listed as “impaired” in accordance with the Clean Water Act 303(d) list regulations: Temescal Canyon Reach 5/6 (impaired by pH), Santa Ana River Reach 3 (impaired by copper, lead, and pathogens), and Santa Ana River Reach 2 (impaired by indicator bacteria). Impairment is typically associated with point and non-point sources of water pollutants including industrial discharge and agricultural operations, respectively. Table 4.9-1, *Receiving Waters for Storm Water Runoff from the Project Site*, lists the receiving waters for storm water runoff from the Project site. The beneficial uses of the receiving surface waters of the Project site are also summarized in Table 4.9-1.

Table 4.9-1 Receiving Waters for Storm Water Runoff from the Project Site

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Stovepipe Canyon Creek	None		None
Temescal Creek Reach 5/6	pH	MUN, REC1, REC2, WARM, WILD, AGR, RARE, GWR.	11 miles
Santa Ana River Reach 3 (HU# 801.21)	Copper, Lead, Pathogens	AGR, GWR, REC1, REC2, WARM, WILD, RARE, SPWN	18 miles
Santa Ana River Reach 2 (HU# 801.13)	Indicator Bacteria	AGR, GWR, REC1, REC2, WARM, WILD, RARE, MUN, SPWN	20 miles

AGR=Agricultural Supply; GWR=Groundwater Recharge; MUN=Municipal and Domestic Supply; REC1=Water Contact Recreation; REC2=Noncontact Water Recreation; RARE=Preservation of Rare and Endangered Species; SPWN=Fish Spawning; WARM=Warm Freshwater Habitat; WILD=Wildlife Habitat
(K&A, 2018b, Table A.1)

E. Groundwater

As shown in Figure 4.9-3, *Groundwater Basins*, the Project site is located immediately adjacent to the Elsinore Groundwater Basin (Lake Elsinore, 2011b, p. 3.9-5; EVWMD, 2005). Almost all of the groundwater production that is used for potable use by the EVWMD occurs in the Elsinore Basin (EVWMD, 2016c, p. 5). Inflows to Elsinore Basin include infiltration of local precipitation, runoff from the surrounding watershed, infiltration from the San Jacinto River prior to reaching Lake Elsinore, and return flows from either irrigation or domestic use. Natural groundwater inflow is almost equal to the average yield of the Basin because there are no natural outflows from the Basin. Groundwater pumping to meet water demands accounts for essentially

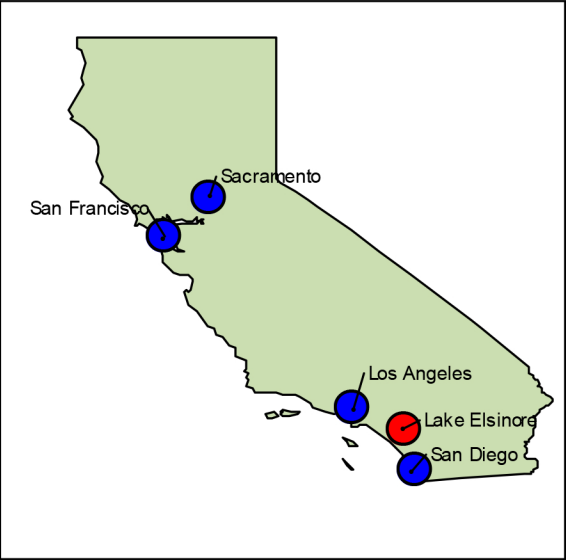
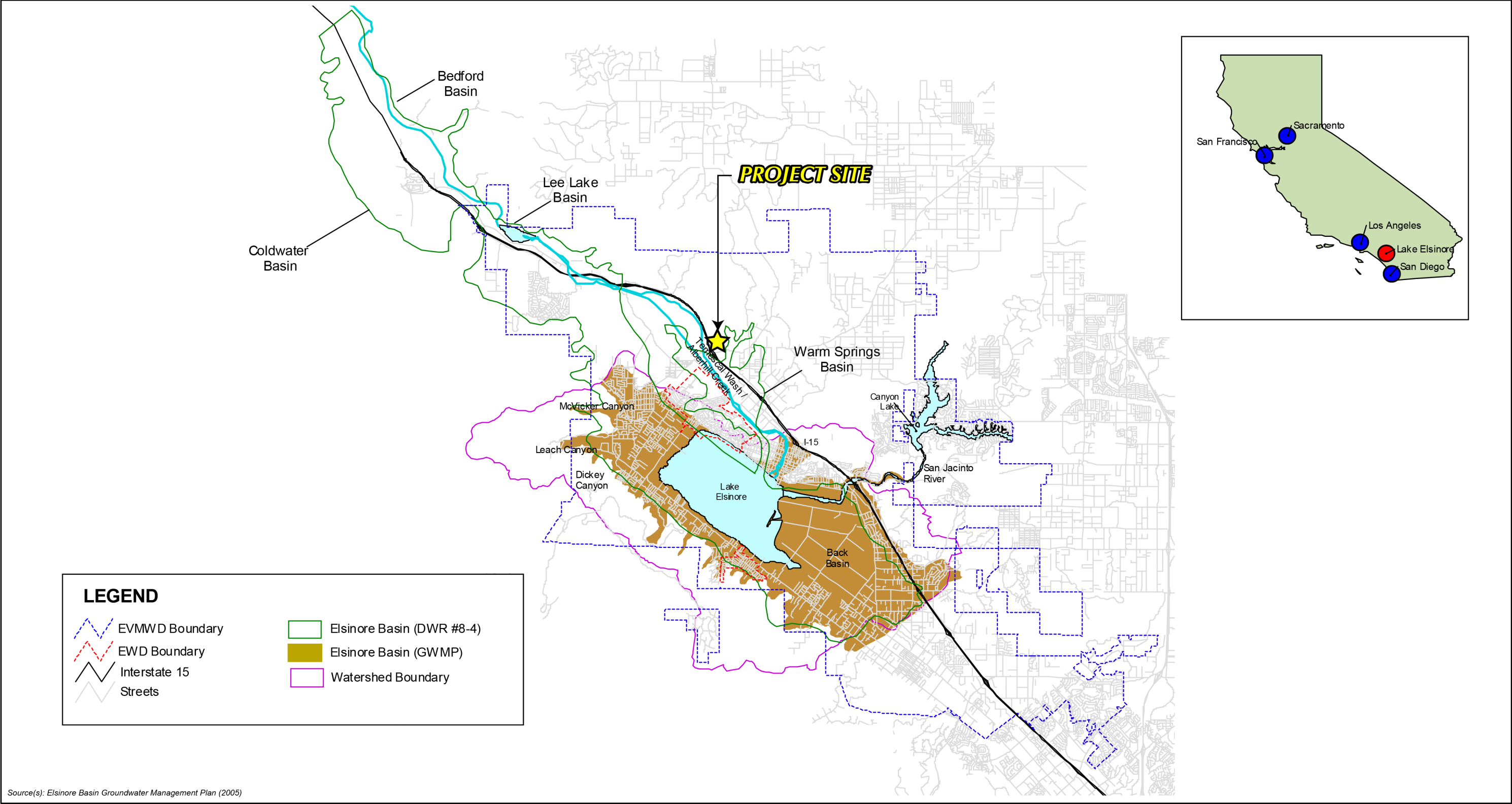
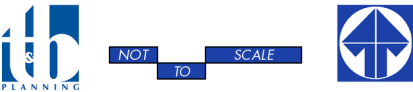


Figure 4.9-3





the entire outflow from the Basin. (EVWMD, 2016c, p. 4-11) In addition to the Elsinore Basin, EVWMD has access to groundwater from the Coldwater Basin, San Bernardino Bunker Hill Basin, Rialto-Colton and the Riverside-North Basin. See EIR Section 4.17, *Utilities and Service Systems*, for more detail on the groundwater resources utilized by EVMWD.

The Project's Geotechnical Report, contained in this EIR as *Technical Appendix D*, states that groundwater was not encountered within the maximum 51.5-foot depth below ground surface (bgs) during the subsurface evaluation. Previous investigations by Geotechnics, Inc. conducted in 2005 reported groundwater as seepage in bedrock or perched on clay layers at depths ranging from 18 to 35 feet bgs. The depth to groundwater on the Project site is likely to vary seasonally, and perched groundwater may occur at the soil-bedrock contact. The Project's Geotechnical Report estimated the historic high groundwater level to be 40 feet bgs. The 40-foot historic high is consistent with the depth to groundwater of approximately 40 feet depicted historic contours for the area. (Terracon, 2018a, pp. 6-7)

4.9.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations related to hydrology and water quality.

A. Federal Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2018a)

2. Federal Flood Insurance Program

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the



escalating costs of repairing damage to buildings and their contents caused by floods. The Federal Insurance and Mitigation Administration (FIMA) within the Federal Emergency Management Agency (FEMA) is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that provide assistance for mitigating future damages from natural hazards. (FEMA, 2002)

3. *Executive Order 11988 – Floodplain Management*

Executive Order 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. (FEMA, 2015)

B. State Regulations

1. *Porter-Cologne Water Control Act*

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 et seq.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)



The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site is located in the Santa Ana River Watershed, which is within the purview of Santa Ana Basin RWQCB. The Santa Ana Basin RWQCB Basin Plan is the governing water quality plan for the region.

2. *California Water Code*

The California Water Code is the principal state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the Regional Water Quality Control Board (RWQCB), water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

3. *California Toxics Rule (CTR)*

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria



that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016, pp. 14-15)

4. *CDFG Code Section 1600 et seq. (Lake- or Streambed Alteration Agreement Program)*

Fish and Game Code § 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
- Deposit debris, waste or other materials that could pass into any river, stream, or lake. (CDFW, n.d)

It should be noted that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, n.d)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, n.d)

5. *Watershed Management Initiative (WMI)*

The State and Regional Water Boards are currently focused on looking at entire watersheds when addressing water pollution. The Water Boards adopted the Watershed Management Initiative (WMI) to further their goals. The WMI establishes a broad framework overlying the numerous federal and State mandated priorities. As such, the WMI helps the Water Boards achieve water resource protection, enhancement and restoration while balancing economic and environmental impacts. (SWRCB, 2017) The integrated approach of the WMI involves three main ideas:

- Use water quality to identify and prioritize water resource problems within individual watersheds. Involve stakeholders to develop solutions.
- Better coordinate point source and nonpoint source regulatory efforts. Establish working relationships between staff from different programs.



- Better coordinate local, state, and federal activities and programs, especially those relating to regulations and funding, to assist local watershed groups. (SWRCB, 2017)

C. Local Regulations

1. *City of Lake Elsinore Municipal Code Chapter 14.08*

City of Lake Elsinore Municipal Code Chapter 14.08, *Stormwater/Urban Runoff Management and Discharge Controls*, intends to protect and enhance the water quality of City watercourses, water bodies, groundwater, and wetlands in a manner pursuant to and consistent with the California Water Code Section 13000 et seq. (Porter-Cologne Water Quality Control Act), Title 33 U.S.C. Sections 1251 et seq. (Federal Clean Water Act). (Lake Elsinore, 2018, Chapter 14.08)

2. *City of Lake Elsinore Municipal Code Chapter 15.64*

City of Lake Elsinore Municipal Code Chapter 15.64, *Flood Damage Prevention*, includes flood load and flood-resistant construction requirements of the building codes and is intended to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas. (Lake Elsinore, 2018, Chapter 15.64)

4.9.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to hydrology and water quality if the Project or any Project-related component would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;*
- Substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;*
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:*
 - Result in substantial erosion or siltation on- or off-site;*
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
 - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
 - Impede or redirect flood flows;*
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or*
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.*



The above listed thresholds are derived directly from Section X of Appendix G to the CEQA Guidelines and address typical adverse effects to hydrology and water quality (OPR, 2018).

4.9.4 IMPACT ANALYSIS

Threshold a: *Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

A. Construction-Related Water Quality Impacts

Grading and construction of the proposed Project would involve substantial ground disturbance resulting in the generation of pollutants such as silt, debris, chemicals, paints, and other solvents potentially affecting water quality. As such, short-term water quality impacts would likely occur in the absence of any protective or avoidance measures.

Pursuant to requirements of the SWRCB, the Project Applicant is required to obtain an NPDES permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. Compliance with the NPDES permit involves the preparation and implementation of a storm water pollution prevention plan (SWPPP) for construction-related activities. The SWPPP would specify Best Management Practices (BMPs) to minimize pollutants in storm water runoff, as well as non-storm water discharges. Typical measures employed during construction include the use of water trucks to minimize erosion; use of straw bale barriers; stabilizing construction entrances; hydroseeding, etc. The implementation of this plan would serve to prevent and/or minimize discharge of additional sources of polluted runoff and hence, protect water quality. Therefore, the Project would not violate any water quality standards or waste discharge requirements during construction, and water quality impacts associated with construction activities would be less than significant requiring no mitigation beyond compliance with the mandatory regulatory requirements (i.e., implementation of BMPs from a Project-specific SWPPP) described herein.

B. Post-Development Water Quality Impacts

Implementation of the proposed Project would permanently alter the amount of impervious surfaces as a result of newly constructed roadways, structures, and other paved surfaces such as driveways, walkways, parking lots, and other residential- and commercial-related hardscape. As a result, there would be an increase in storm water runoff when compared with existing conditions. This runoff would contain such urban pollutants as tire-wear residues; petroleum products such as oil and grease; landscaping fertilizer and pesticides; as well as litter and other types of wastes. Other potential sources of urban pollutants include bacterial indicators, metals, nutrients, possible pesticides from landscape maintenance activities, toxic organic compounds, sediments, trash/debris, oil, and grease (K&A, 2018b, pp. 2-3). The pollutants are washed off from the street surfaces by a rainfall adequate to produce sufficient runoff. The EPA has identified street surfaces as the primary source of pollution in urban areas, and such runoff is considered to be a “non-point” source. Unlike “point” source wastes, non-point sources cannot be quantified through flow measurement, sampling, and analysis techniques. This runoff, typical of urban use, would contribute to the incremental degradation of the water quality downstream. This would be regarded as a significant cumulative water quality impact.



Compliance with the City's NPDES permit requirements, as stipulated in the CWA, would reduce impacts to water quality associated with Project-related activities. The NPDES permit requires the preparation of a post-construction management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic controls. A WQMP (EIR *Technical Appendix I2*) was prepared for the proposed Project and identifies non-structural and structural source controls as well as Project design features and BMPs. Structural controls include planning the location of inlets; showing locations of native trees or areas of shrubs and groundcover to be undisturbed and retained; showing proposed native trees or areas of shrubs and ground cover; showing location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet; proper handling, storage, and regular pickup of site refuse and recycled materials; designing roofs to discharge runoff to adjoining landscaping; avoiding roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff; implementing minimal driveway widths; protecting slopes and channels; landscaping hillsides; and effective irrigation.

Non-structural source controls include: maintenance of inlet markings; education of property owners, tenants, and occupants; limiting the use of pesticides; activity restrictions; irrigation system and landscape maintenance/management; maintenance of pools, spas, and decorative fountains; common area litter control; prohibit/prevent dumping of liquids or hazardous wastes; fire sprinkler tests; sweeping of plazas, sidewalks, and parking lots regularly; and drainage facility inspection/maintenance. The Project's WQMP also outlines the long-term funding mechanisms and contractual obligations for the operation and maintenance of the Project's water quality features. The on-site drainage basins would be maintained by the City of Lake Elsinore through a Landscape Maintenance District (LMD) and the Nichols Ranch Home Owners' Association (HOA). (K&A, 2018b, pp. 31-35)

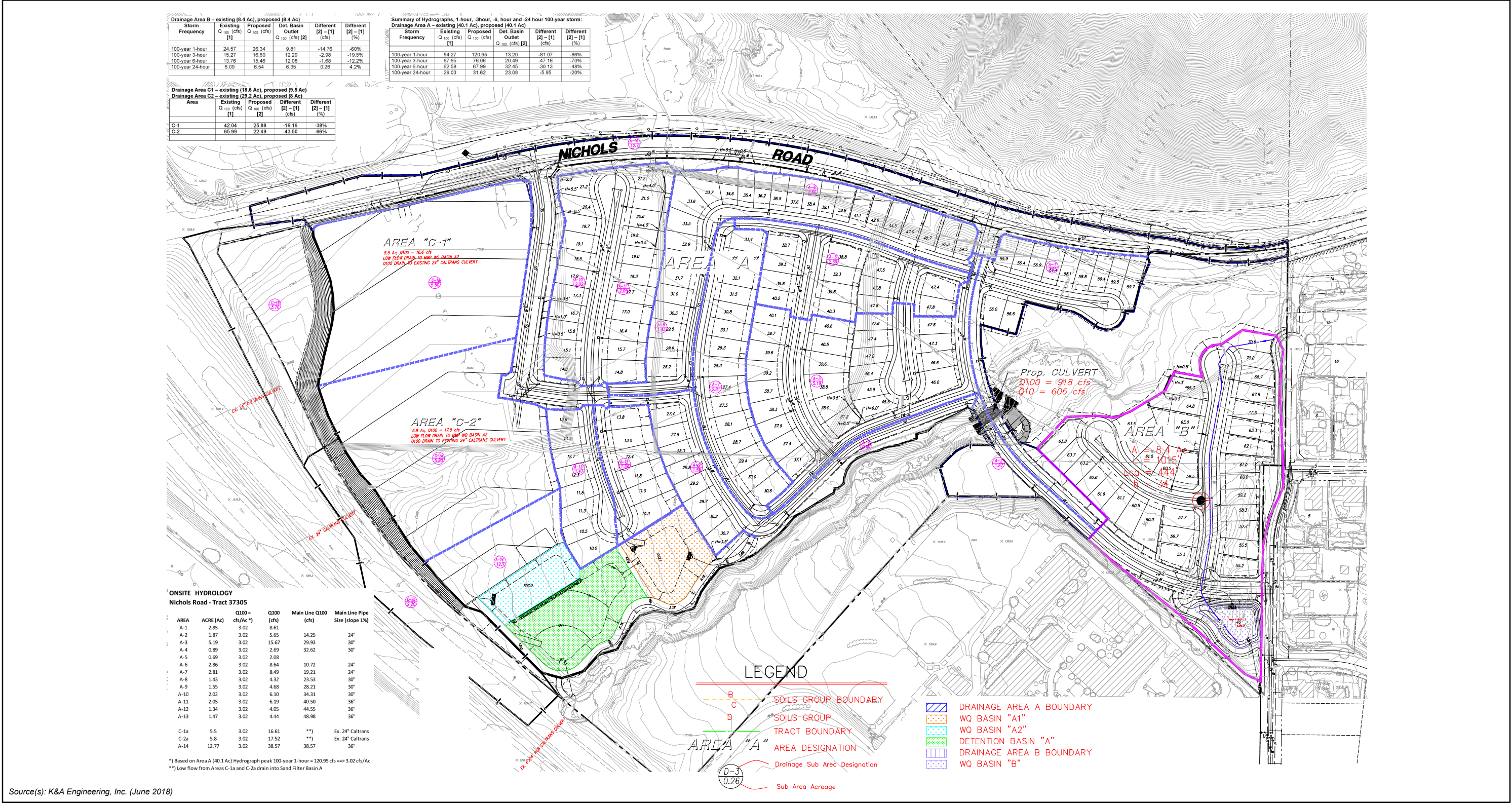
The Project's WQMP has been prepared in accordance with the Santa Ana Region Hydromodification Management Plan and City of Lake Elsinore requirements. The proposed storm drain design is shown in Figure 3-4, *Drainage Plan*, and was developed to maintain existing drainage patterns to the maximum extent practicable. The system collects flows generated on-site and flows generated off-site that are tributary to the Project site and conveys the flows via an underground storm water drain system to two (2) on-site drainage basins for treatment. Drainage basins are proposed to capture and treat the flows from tributary areas. These primary design features minimize urban runoff, limit the impervious footprint, maximize water conservation areas, and minimize the connection of impervious areas. These design measures are intended to capture first flush flows, defined as the first 0.75-inch of precipitation from storm events, which represents the initial surface runoff from a storm event containing a typically higher concentration of pollutants. All basins and storm drain facilities necessary for each phase of development would be built prior to the construction of any residential homes or commercial uses for each phase of development. Thus, at any stage of the proposed Project, the storm drain facilities would have more capacity than needed until final Project build-out. Adherence to statutory requirements would ensure that water quality and waste discharge requirements are not violated. As such, with respect to the potential to violate water quality standards and waste discharge requirements and further degrade existing surface or ground water quality, or otherwise substantially degrade water quality, long-term operation of the Project would result in less-than-significant impacts.



Threshold b: Would the Project substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

No potable groundwater wells are proposed by the Project. In addition, there are no active or inactive water wells located on the Project site. The Project site would receive potable water from the Elsinore Valley Municipal Water District (EVMWD), which relies on water supplies from the Elsinore Groundwater Basin and the Coldwater Groundwater Basin; however, water supplies are primarily imported from the Metropolitan Water District through the Western Municipal Water District (EVMWD, 2016c, p. 6-1). Local potable groundwater accounts for approximately 33% of the water supply. It is anticipated that water demands as a result of future development would be met through a combination of additional surface water, groundwater, recycled water, and through enhanced water conservation. The additional groundwater sources would be sufficient to meet the projected demand through the year 2040, and no additional groundwater sources beyond those previously identified would be required to meet water demands (EVMWD, 2016c, pp. 7-8, 7-9). Thus, the Project would not substantially deplete groundwater and impacts would be less than significant. For a detailed discussion of water supply and demand, refer to Subsection 4.17, *Utilities and Service Systems*.

The Elsinore Valley is underlain by the Elsinore Groundwater Basin, as shown in Figure 4.9-3 (Lake Elsinore, 2011b, p. 3.9-5). The Elsinore Groundwater Basin is bounded on the southwest by the Santa and Elsinore Mountains along the Willard fault, in the northwest by the Temescal Sub basin of the Upper Santa Ana River Valley Groundwater Basin, and bounded in the northeast by the Peninsular Ranges along the Glen Ivy Fault (DWR, 2006, p. 1). With development of the Project site, the site's existing undeveloped character would be converted to that of a residential and commercial development. As a result of this conversion, impervious surfaces would be introduced to the site which could adversely affect groundwater recharge that occurs under existing conditions. As shown on Figure 4.9-4, *Proposed Drainage Conditions*, and Table 4.9-2, *Existing vs. Proposed Drainage Conditions*, the Project would reduce 2-year 24-hour peak flow from the Project site under post-development conditions by up to 28 percent in Drainage Area A and 37.5 percent in Drainage Area B. However, the total amount of water leaving the Project site under post-development conditions would be similar to existing conditions, as all runoff from the Project site would ultimately discharge to the receiving waters listed in Table 4.9-1. Thus, because the Project would not affect the total flows leaving the site, the Project has no potential to result in indirect impacts due to interference with groundwater recharge that occurs downstream. As indicated in the discussion and analysis of Threshold a, above, the proposed Project has been designed to incorporate two (2) drainage basins on-site. These design features would attenuate post-development runoff in a manner consistent with Riverside County Flood Control and Water Conservation District (RCFCWCD) requirements that are applicable to the Project site. Accordingly, the proposed Project would not substantially decrease groundwater supplies, substantially interfere with groundwater recharge, result in substantial changes in the rate or amount of surface runoff, or interfere with sustainable groundwater management of the Elsinore Groundwater Basin, and a less-than-significant impact would occur.



Source(s): K&A Engineering, Inc. (June 2018)

Figure 4.9-4

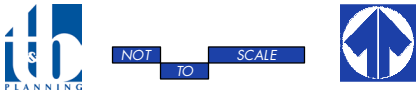




Table 4.9-2 Existing vs. Proposed Drainage Conditions

Drainage Area A – existing (51.4 Ac), proposed (51.4 Ac)

Storm Frequency	Existing Q_2 (cfs) [1]	Proposed Q_2 (cfs)	Det. Basin Outlet Q_2 (cfs) [2]	Different [2] – [1] (cfs)	Different [2] – [1] (%)
2-year 24-hour	9.37	13.12	6.75	-2.62	-28%

Drainage Area B – existing (8.4 Ac), proposed (8.4 Ac)

Storm Frequency	Existing Q_2 (cfs) [1]	Proposed Q_2 (cfs)	Det. Basin Outlet Q_2 (cfs) [2]	Different [2] – [1] (cfs)	Different [2] – [1] (%)
2-year 24-hour	1.52	1.97	0.95	-0.57	-37.5%

(K&A, 2018a, p. 28)

Threshold c: *Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:*

- i) *Result in substantial erosion or siltation on- or off-site;*
- ii) *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
- iii) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- iv) *Impede or redirect flood flows?*

A. Erosion and Siltation Impacts

As shown on EIR Figure 3-9, *Conceptual Grading Plan*, the Project has been designed to generally maintain the existing topography of the site, with minor modifications as necessary to accommodate site development and proposed drainage conditions. Nonetheless, construction of the proposed Project would involve substantial ground disturbance during clearing and grading of the site. In addition, on-site erosion could occur if graded slopes are not stabilized prior to ultimate development or landscaping. The proposed grading activities would generate fair amounts of silt which could be carried off-site during a heavy rainfall event. Should such an event occur in the absence of any preventative measures to contain silt and other soils on-site, erosion and/or siltation downstream would result.

However, pursuant to requirements of the SWRCB, the Project Applicant would be required to obtain a NPDES permit for construction activities on-site. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total



land area. Compliance with the NPDES permit involves the preparation and implementation of a SWPPP for construction-related activities. The SWPPP would specify BMPs to minimize the potential for erosion and siltation to occur and would include specific Project site measures to address the potential for the caving in of temporary excavations. Typical BMPs that are implemented at construction sites to protect water quality include the implementation of straw bale barriers, plastic sheeting/erosion control blankets, and outlet protection measures. With mandatory adherence to the SWPPP requirements, effects associated with erosion, siltation, water quality, and flooding on downstream water sources and flood control systems would be maintained at a level below significance.

With respect to the Project's proposed drainage plan, Figure 4.9-2, previously presented, depicts the Project site's existing drainage areas, while Figure 4.9-4, previously presented, presents the Project's proposed drainage areas and proposed drainage patterns. Table 4.9-2, previously presented, shows the differences in peak flow rates of discharge from the Project site (via Stovepipe Creek through an existing Caltrans 6'x14' RCB culvert and existing drainage facilities in El Toro Road) under existing and proposed conditions. As shown in Table 4.9-2, under post-development conditions, 100-year peak storm flows would be reduced compared to existing conditions. The Project's drainage plan has been designed to maintain existing drainage patterns to the maximum extent practicable, and all runoff from the Project site discharges to either the existing Caltrans RCB culvert located along the westerly Project boundary via Stovepipe Creek or existing drainage facilities in El Toro Road which both ultimately discharge to the receiving waters listed in Table 4.9-1. The proposed drainage plan was previously depicted on EIR Figure 3-4 and utilizes natural water flow patterns to the extent feasible.

The Project proposes two (2) drainage basins, an underground storm drain system, and streets with curb opening catch basins to convey storm water flows through the Project site and towards the proposed drainage basins. The four (4) drainage areas proposed on-site and the two (2) proposed drainage basins are detailed below:

- **Drainage Area A.** Drainage Area A would consist of 889.1 acres of land which would be divided into three drainage sub-areas, including Drainage Areas A, A-1, and A-2. Drainage Area A would include 837.7 acres of off-site lands northeast of the Project site including the area tributary to Stovepipe Creek. Drainage Area A-1 would include 27.03 acres tributary to the proposed residential area. Drainage Area A-2 would include 24.37 acres tributary to the proposed commercial site and proposed Nichols Road area. Under post-development conditions, the 837.7-acre portion of Drainage Area A that includes off-site areas tributary to Stovepipe Creek would continue to enter the Project site via two 24-inch pipes and over the concrete spillway and would continue to drain to the existing 6'x14' Caltrans RCB culvert. Drainage Area A-1 would drain into proposed Extended Drainage Basin A1 to mitigate water quality and peak flow rates and would outlet into Drainage Basin A. Drainage A-2 would drain into a proposed sand filter basin to mitigated water quality impacts and outlet into Detention Basin A to mitigate water quality and the increase in peak flow from the proposed Project prior to draining into Stovepipe Creek. (K&A, 2018a, p. 7)
- **Drainage Area B.** Drainage Area B would consist of approximately 8.4 acres of the southeastern portion of the Project site, south of Stovepipe Creek. Under post-development conditions, Drainage



Area B would drain into a proposed enhanced sand filter and would outlet into Drainage Basin B and would then outlet through a parkway drain to existing drainage facilities El Toro Road. (K&A, 2018a, p. 7)

- **Drainage Area C.** Drainage Area C would consist of approximately 17.2 acres of the northwestern portion of the project site, north of Stovepipe Creek. Drainage Area C is separated into two sub-areas, including Drainage Areas C-1 and C-2. Drainage Area C-1 consists of 9.2 acres, of which approximately 5.5 acres of is tributary to the proposed commercial site and 3.7 acres includes existing areas which were originally tributary to the off-site existing 24-inch Caltrans culvert. Drainage Area C-2 consists of approximately 8.0 acres, of which 5.8 acres is tributary to the proposed commercial site and 2.2 acres includes existing areas which were originally tributary to the existing off-site 24-inch Caltrans culvert. (K&A, 2018a, p. 7)
- **Drainage Area D.** Drainage Area D would consist of approximately 25.9 acres of the off-site area north of the Project site. Drainage Area D is tributary to proposed storm drain facilities in Nichols Road. (K&A, 2018a, p. 7)

Based on the proposed drainage facilities described above and the analysis demonstrating that the facilities have been designed in accordance with the requirements of the City of Lake Elsinore and the RCFCWCD, under interim construction conditions, all proposed basins and storm drain facilities would be built prior to the construction of any residential homes or commercial uses for each phase of development. Thus, during the Project's interim construction phase, storm water runoff from the site would be less than the runoff flow rates that occur under existing conditions and the storm drain facilities in place would have more capacity than needed until final Project buildout. Furthermore, upon buildout of the proposed Project, storm water runoff from the site would be less than the runoff flow rates that occur under existing conditions. As described above, Drainage Areas A through D would ultimately discharge to the existing Caltrans RCB culvert located along the westerly Project site boundary and to existing drainage facilities within El Toro Road. As shown in Table 4.9-2, peak discharge to the existing Caltrans RCB culvert located along the westerly Project site boundary under the 2-year storm 24-hour peak flow scenario would be reduced by 2.62 cubic feet per second (cfs) and peak discharge to facilities in El Toro Road would be reduced by 0.57 cfs. The Project's Drainage Plan has been designed to generally retain the site's existing topographic character, except as necessary to allow for proper drainage and sewer flows. Accordingly, with implementation of the proposed Project, runoff from the Project site would not result in substantial erosion or siltation on- or off-site, and a less-than-significant impact would occur.

In addition, with buildout of the Project, the site would generally be converted from an undeveloped site to that of a mixed-use community (including residential and commercial retail land uses) consisting of urban land uses and ornamental landscaping. As compared to existing conditions, development of the site with residential and commercial land uses would reduce the site's potential for generating substantial amounts of erosion or siltation due to the reduction in permeable surfaces. Moreover, with incorporation of drainage basins that would address water quality and would reduce the amount of siltation in site runoff, impacts due to erosion or siltation would be less than significant. The proposed drainage basins are designed according to the standards of the City of Lake Elsinore and the RCFCWCD to detain and slowly release storm water to allow particles



and associated pollutants to settle out in the basin prior to storm water leaving the Project site. The drainage basins have been designed to treat the “first flush” of a rainfall event (generally the first 0.75-inch of precipitation) that typically generates the most polluted storm water. Therefore, the proposed drainage basins would maximize storm water infiltration and evapotranspiration and minimize direct discharge of runoff to the storm drain system. Accordingly, under long-term conditions, impacts due to substantial erosion or siltation would be less than significant.

B. On- and Off-Site Impacts due to Flood Hazards and Flood Flows

According to the FEMA FIRM No. 06065C2928G, dated August 28, 2008, the majority of the portions of the Project site that are proposed for development are not within a 100-year flood hazard area. The only portion of the Project site located within the 100-year flood hazard area is Stovepipe Creek, which traverses the Project site in a northeast-to-southwest orientation. Stovepipe Creek is located within ‘Zone A’ of the FEMA FIRM, which indicates that no base flood elevations have been determined, but that the area is within the special flood hazard areas subject to inundation by the 100-year flood. As currently mapped, the Project would result in changes to the mapped flood areas on site as needed to accommodate residential and commercial development on the site. Although no housing or structures are proposed within Stovepipe Creek, implementation of the proposed Project would adjust the hydrologic characteristics of Stovepipe Creek and would result in the modification of the existing special flood hazard area. (FEMA, 2008)

In order to address the Project’s proposed modification of the existing special flood hazard area, the Project would be required to obtain a Conditional Letter of Map Revision (CLOMR) from FEMA. A CLOMR is FEMA’s comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and result in the modification of the existing regulatory floodway or special flood hazard areas. Upon completion of construction for the proposed Project, the Project Applicant would be required to obtain a Letter of Map Revision (LOMR) from FEMA. A LOMR is FEMA’s modification to an effective FIRM, and would be based on the implementation of physical measures that would affect the hydrologic or hydraulic characteristics of a flooding source and result in a modification of the existing regulatory floodway or the special flood hazard area. The LOMR would officially revise the FIRM and when appropriate, includes a description of the modifications. (FEMA, 2017b; FEMA, 2018) The required CLOMR and LOMR for the Project would serve to modify the FIRM for the Project site to modify the floodplain boundary to reflect the boundaries of Stovepipe Creek following construction of the proposed Project and no development would occur within the revised mapped flood zones. Furthermore, upon grading as proposed, areas proposed for development would be located outside of the 100-year flood zone. Therefore, following regulatory approval from FEMA, the Project would not place housing or structures within a 100-year flood hazard as mapped on a FIRM, and would not impede or direct flood flow; thus, compliance with mandatory regulatory requirements (i.e., the required CLOMR and LOMR for the site) would ensure that impacts due to flood hazards are reduced to less-than-significant levels.

Additionally, and as previously shown on Table 4.9-2, under the post-development condition, peak discharge to Drainage Area A under the 2-year storm 24-hour peak flow scenario would be reduced by 2.62 cfs and peak discharge to Drainage Area B under the 2-year storm 24-hour peak flow scenario would be reduced by 0.57 cfs. The proposed Project has been designed to include drainage basins that would reduce post-development runoff rates in accordance with the requirements of the City of Lake Elsinore and RCFCWCD. Because the



proposed Project has been designed to attenuate post-development runoff from the site, Project-related runoff would not substantially increase the rate or amount of surface runoff in downstream areas in a manner that would result in flooding on- or off-site. Additionally, the Project would not impede or redirect flood flows. A less-than-significant impact would occur.

C. Impacts due to Polluted Runoff and Stormwater Capacity

Compliance with the City's NPDES permit requirements, as stipulated in the CWA, would reduce impacts to water quality associated with Project-related activities. The NPDES permit requires the preparation of a post-construction management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic controls. A WQMP (EIR *Technical Appendix I2*) was prepared for the proposed Project and identifies non-structural and structural source controls as well as Project design features and BMPs. Structural controls include planning the location of inlets; showing locations of native trees or areas of shrubs and groundcover to be undisturbed and retained; showing proposed native trees or areas of shrubs and ground cover; showing location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet; proper handling, storage, and regular pickup of site refuse and recycled materials; designing roofs to discharge runoff to adjoining landscaping; avoiding roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff; implementing minimal driveway widths; protecting slopes and channels; landscaping hillsides; and effective irrigation.

Non-structural source controls include: maintenance of inlet markings; education of property owners, tenants, and occupants; limiting the use of pesticides; activity restrictions; irrigation system and landscape maintenance/management; maintenance of pools, spas, and decorative fountains; common area litter control; prohibit/prevent dumping of liquids or hazardous wastes; fire sprinkler tests; sweeping of plazas, sidewalks, and parking lots regularly; and drainage facility inspection/maintenance. The Project's WQMP also outlines the long-term funding mechanisms and contractual obligations for the operation and maintenance of the Project's water quality features. The on-site drainage basins would be maintained by the City of Lake Elsinore through a Landscape Maintenance District (LMD) and the Nichols Ranch Home Owners' Association (HOA). (K&A, 2018b, pp. 31-35)

The Project's WQMP has been prepared in accordance with the Santa Ana Region Hydromodification Management Plan and City of Lake Elsinore requirements. The proposed storm drain design is shown in Figure 3-4, *Drainage Plan*, and was developed to maintain existing drainage patterns to the maximum extent practicable. The system collects flows generated on-site and flows generated off-site that are tributary to the Project site and conveys the flows via an underground storm water drain system to two (2) on-site drainage basins for treatment. Drainage basins are proposed to capture and treat the flows from tributary areas. These primary design features minimize urban runoff, limit the impervious footprint, maximize water conservation areas, and minimize the connection of impervious areas. These design measures are intended to capture first flush flows, defined as the first 0.75-inch of precipitation from storm events, which represents the initial surface runoff from a storm event containing a typically higher concentration of pollutants. All basins and storm drain facilities necessary for each phase of development would be built prior to the construction of any residential homes or commercial uses for each phase of development. Thus, at any stage of the proposed Project, the storm drain facilities would have more capacity than needed until final Project build-out. Adherence to statutory requirements would ensure that the Project does not provide substantial additional sources of polluted



runoff and would ensure Project runoff does not exceed the capacity of any existing or planned stormwater drainage systems. As such, with respect to the potential for additional sources of polluted runoff, long-term operation of the Project would result in less-than-significant impacts.

Threshold d: In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to Project inundation?

As noted above under the discussion of Threshold c., the Project would not be subject to inundation because development proposed by the Project would be located outside the flood plain with approval of a CLOMR and LOMR. Thus, impacts due to flood hazards would be less than significant.

The Project site is located approximately 25 miles northeast of the Pacific Ocean; therefore, the potential for a tsunami to affect the Project site is non-existent (Google Earth, 2016). As such, the Project would have no impact with respect to exposing people or structures to inundation by tsunami.

The Project site is not located near any large water bodies, including reservoirs that could result in potential indirect impacts associated with a seiche. The closest water body that has the potential to produce a seiche is Lake Elsinore, which is located approximately 1.8 miles to the south of the Project site (Google Earth, 2016). Due to the 1.8-mile distance to Lake Elsinore from the Project site and the lower elevation of the lake (i.e., the Project site occurs approximately 250 feet in elevation above Lake Elsinore), the Project would not be subject to inundation by seiches associated with Lake Elsinore, and there would be no release of pollutants from the Project site as a result of any seiches. Based on the foregoing, impacts associated with inundation by seiche would be less than significant.

The Project site is located approximately 1.7 miles north of a levee associated with Lake Elsinore, and 4.7 miles northwest of the Railroad Canyon Dam. As discussed above in Subsection 4.9.1C, according to the City of Lake Elsinore General Plan EIR, the Project site is located outside of dam inundation zones (Lake Elsinore, 2011b, p. 3.9-35). Furthermore, the Project site is located at a higher elevation than Lake Elsinore and is thus not subject to inundation associated with levees associated with the Lake. Additionally, should the Railroad Canyon Dam fail, inundation would be limited to lands located between the dam and Lake Elsinore; thus, the Project site would not be subject to inundation in the event of failure of the Railroad Canyon Dam, and would have no potential for the release of pollutants in the event of failure of a dam or levee. Notwithstanding, the Project would be subject to General Plan policies related to dam inundation. The Public Safety and Welfare Chapter of the Lake Elsinore General Plan includes the following “Policy and Implementation Plan” that are specifically intended to minimize the risk of injury and residents and visitors, and property damage due to flooding.

- Policy 5.1: Continue to ensure that new construction in floodways and floodplains conforms to all applicable provisions of the National Flood Insurance Program in order to protect buildings and property from flooding. (Lake Elsinore, 2011a, p. 3-14)
- Implementation Program: Through the project review and the CEQA processes the City shall assess new development and reuse applications for potential flood hazards, and shall require compliance with FEMA Special Flood Hazard Areas where appropriate. (Lake Elsinore, 2011a, p. 3-14)



Compliance with the above-referenced City of Lake Elsinore General Plan “Policy and Implementation Plan,” as well as the construction of the two (2) storm drainage basins on-site would ensure that any potential dam inundation hazards associated with future development would be less than significant and would ensure the Project would not involve the release of pollutants in the event of a failure of a levee or dam.

Threshold e: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project site is located within the Santa Ana River watershed, which is regulated by the Santa Ana Regional Water Quality Control Board (RWQCB). The RWQCB has developed a “Water Quality Control Plan” for the Santa Ana River Basin (herein, “Basin Plan”), which was most recently updated in February 2016. The Basin Plan establishes water quality standards for the ground and surface waters of the region. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards. The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. The RWQCB ensures compliance with the Basin Plan through its issuance of National Pollutant Discharge Elimination System (NPDES) Permits, issuance of Waste Discharge Requirements (WDR), and Water Quality Certifications pursuant to Section 401 of the Clean Water Act (CWA). In conformance with these requirements, the Project Applicant has prepared a Water Quality Management Plan (WQMP) and hydrology study, which are included as *Technical Appendices I2 and II*, respectively, which demonstrates that the Project’s proposed drainage plan would meet all applicable requirements of the Basin Plan, including requirements and conditions of approval associated with NPDES permits, issuance of WDRs, and Water Quality Certifications. As such, the Project would not conflict with the Basin Plan, and impacts would be less than significant.

As indicated under the discussion and analysis of Threshold b, above, and as depicted previously on Figure 4.9-3, the Project site is not located within the Elsinore Basin Ground Water Management Zone, and the total amount of runoff leaving the site would be similar to existing conditions. The Project site also is not located within any sustainable groundwater management plans. Additionally, with implementation of the Project’s WQMP and SWPPPs during construction activities, the Project would not contribute substantial amounts of polluted runoff that could adversely affect the groundwater basin. Additionally, although the rate of runoff from the site would be reduced as compared to existing conditions, the total amount of water leaving the site would be the same, thereby allowing for groundwater recharge in downstream areas. As such, the Project would not conflict with any sustainable groundwater management plans, and impacts would be less than significant.

4.9.5 CUMULATIVE IMPACT ANALYSIS

The cumulative impact analysis considers construction and operation of the proposed Project in conjunction with other development projects in the vicinity of the Project site and resulting from full General Plan buildout in the City of Lake Elsinore and surrounding areas that are located within the Santa Ana River watershed. The following analysis of potential cumulative impacts to hydrology and water quality is divided into five general



topics of discussion by combining Thresholds of Significance into groupings of like topics, consistent with the analysis presented in Subsection 4.9.4.

A. Water Quality

During Project construction, the proposed Project and any other development projects under construction in the Elsinore Groundwater Basin have the potential to result in a cumulative water quality impact, including erosion and sedimentation. Pursuant to the requirements of the State Water Resources Board and the Santa Ana RWQCB, all construction projects that disturb one (1) or more acres of land are required to obtain a NPDES permit and obtain coverage for construction activities. In order to obtain coverage, an effective site-specific SWPPP is required to be developed and implemented for all development projects. The SWPPP must identify potential on-site pollutants and identify and implement an effective combination of erosion control and sediment control measures (i.e., BMPs) to reduce or eliminate discharge of pollutants to surface water from storm water and non-storm water discharges. In addition, the Project and all cumulative developments (refer to Table 4.0-1 of this EIR) would be required to comply with the Water Quality Control Plan for the Santa Ana Region (Basin Plan). Compliance with these mandatory regulatory requirements would ensure the Project's contribution to water quality impairments during Project construction would be less-than-cumulatively considerable and no mitigation is required.

Implementation of the proposed Project and other cumulative development projects would permanently alter the amount of impervious surfaces as a result of newly constructed roadways, structures, and other paved surfaces such as driveways, walkways, parking lots, and other hardscapes. Therefore, the implementation of the Project and other cumulative development projects would result in an increase in storm water runoff when compared with existing conditions and could result in a potential increase in urban pollutants that could contribute to the incremental degradation of the downstream water quality. However, the Project as well as other cumulative development projects would be required to comply with the NPDES permit requirements, as stipulated in the CWA, which would reduce impacts to water quality associated with the Project and other cumulative development projects. Additionally, the NPDES permit requires the preparation of a post-construction storm water management program, such as a WQMP, to ensure ongoing protection of the watershed basin by requiring structural and programmatic storm water controls. The Project and all other cumulative development projects would be required to implement these storm water controls, design features, and BMPs. Accordingly, mandatory compliance with NPDES requirements and implementation of BMPs from project-specific WQMPs would ensure the Project would result in less-than-cumulatively considerable impacts to water quality.

B. Groundwater Supply and Recharge

As discussed under Threshold b, the City of Lake Elsinore obtains its potable water from EVMWD, which sources its potable water supplies primarily through purchasing water from the Metropolitan Water District, but also extracts groundwater from the Elsinore Groundwater Basin and the Coldwater Groundwater Basin. The UWMP concluded that the EVMWD currently has sufficient water supplies to meet existing and future demands, based on a review of the City's water supply entitlements, water rights, and water service contracts (EVMWD, 2016c, pp. 7-8, 7-9). Accordingly, because the Project has a reliable source of water and does not propose to operate any groundwater extraction wells, the Project would have no potential to deplete



groundwater supplies, and would therefore have no potential to have a cumulatively-considerable adverse impact to groundwater supplies. Cumulatively-considerable impacts due to groundwater demand would be less than significant.

Although development of the proposed Project (similar to other development projects throughout the City of Lake Elsinore) would increase the quantity of impervious surfaces, the Project proposes to include drainage basins and permeable landscape areas that would allow for the percolation of on-site storm water runoff into the groundwater basin. Additionally, the total amount of water leaving the site would be similar to existing conditions, thereby allowing for continued infiltration to pervious areas downstream (e.g., downstream portions of the Elsinore Groundwater Basin, the Temescal Canyon Reach, and the Santa Ana River). Accordingly, the Project would result in a less-than-cumulatively considerable impact to groundwater recharge in the Elsinore Groundwater Basin.

C. Erosion and Siltation

The proposed Project incorporates design features (i.e., drainage basins) that would ensure that the Project's post-development drainage conditions closely approximate those that occur under existing conditions, in a manner consistent with City of Lake Elsinore and RCFCWCD requirements. In addition, the proposed Project's grading plan seeks to generally retain the site's existing topographic character. These characteristics would ensure that substantial erosion and siltation do not occur on- or off-site, and that Project-related drainage would not exceed the capacity of existing drainage systems. The Project would have less-than-significant impacts with respect to erosion and siltation. Other cumulative projects in the vicinity of the proposed Project also would be required to comply with regulatory requirements and implement design features and mitigation measures to reduce potential impacts associated with erosion and siltation. Accordingly, the Project would result in less-than-cumulatively considerable impacts due to erosion and siltation.

D. Flood Hazards

The proposed Project would generally maintain the existing drainage pattern of the Project site and the proposed Project would not affect the course of any streams or rivers. In addition, the Project's storm water drainage system is designed to ensure that peak storm water runoff discharge flows are decreased compared to existing conditions and can be adequately accommodated by existing, proposed, and planned master storm drain facilities. Accordingly, because the Project would result in a decrease in the peak storm water runoff discharge flow compared to existing conditions, the Project would not have the potential to contribute to increased flooding hazards on- or off-site. Therefore, there is no potential for the Project to result in cumulatively-considerable impacts to flooding on- or off-site when considered with other cumulative development projects (see Table 4.0-1 of this EIR). Accordingly, the Project would have a less-than-cumulatively considerable impact associated with flooding.

The FEMA FIRM for the Project site indicates that Stovepipe Creek is located within a special flood hazard area. The Project would be required to obtain a CLOMR and LOMR from FEMA to modify the floodplain boundaries. Following the modification of the floodplain boundaries on-site, no development would occur within the revised flood zones. Any other cumulative developments that seek to revise mapped floodplains would similarly be required to obtain a CLOMR and LOMR. Accordingly, the Project's potential to contribute



to a cumulatively-considerable impact associated with placing housing or structures within a 100-year flood zone would be less than significant.

E. Construction of Storm Water Drainage Facilities

Cumulative impacts associated with the provision of storm water drainage facilities are evaluated throughout the appropriate issue areas in this EIR. In all cases, where cumulatively significant impacts associated with any Project component are identified, mitigation measures have been imposed to reduce such impacts to the maximum feasible extent. Accordingly, impacts associated with the provision of stormwater drainage facilities to serve the proposed Project would be less-than-cumulatively considerable.

F. Levee or Dam Failure

According to the City of Lake Elsinore General Plan EIR, the Project site is located outside of dam inundation zones. Furthermore, compliance with the City of Lake Elsinore General Plan “Policy and Implementation Plan” as well as the construction of the two (2) storm water drainage basins on-site, would ensure that any potential dam inundation hazards associated with future development would be less than significant. Other cumulative development projects that are located within dam inundation zones also would be required to comply with applicable regulatory requirements addressing dam inundation flood hazards, as well as implement on-site flood control measures (such as drainage basins) in accordance with the requirements of their respective jurisdictions. There are no components of the proposed Project that would result in a cumulatively-considerable increase in the risk of levee or dam failures. As such, the Project would result in a less-than-cumulatively considerable impact associated with the failure of a levee or a dam.

G. Seiches and Tsunamis

Due to the distance of the Project site from large bodies of water that could be affected by a seiche or tsunami (including the Pacific Ocean), the Project is not subject to hazards associated with seiches or tsunamis. There are no components of the proposed Project that would increase the potential for seiches or tsunamis. Accordingly, the proposed Project has no potential to contribute to a cumulatively-considerable impact associated with seiches or tsunamis.

H. Water Quality Control Plans and Sustainable Groundwater Management Plans

As indicated under the analysis of Threshold e., the Project site is not subject to any sustainable groundwater management plans, and the Project would not affect the total amount of runoff from the site and would not result in substantial amounts of polluted runoff that could affect local aquifers. Additionally, the Project and other cumulative developments would be subject to NPDES permits, issuance of WDRs, and Water Quality Certifications pursuant to Section 401 of the CWA. As such, cumulatively-considerable impacts would be less than significant.

4.9.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. With implementation of the BMPs from the SWPPP and the Project-specific WQMP, included as an applicable City Regulation below, as well as implementation of the



Project's drainage plan that includes two (2) drainage basins, included as an applicable City Regulation below, the Project would result in less-than-significant impacts with respect to water quality.

Threshold b: Less-than-Significant Impact. The Project has a reliable source of domestic water and does not propose any new potable water wells that would directly extract groundwater. Groundwater recharge would occur in on-site drainage basins and landscaped areas, and water conveyed off-site would have the ability to percolate into the groundwater table. The Project would not 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, and the impact would be less than significant.

Threshold c: Less-than-Significant Impact. Implementation of the BMPs from the Project-specific SWPPP and the on-site drainage basins, included as applicable City Regulations, would ensure that construction and operation of the Project would not result in substantial erosion or siltation on- or off-site or contribute runoff storm water which would exceed the capacity of existing or planned storm water drainage systems, provide substantial additional sources of polluted runoff, or impede or redirect flood flows.

With implementation of the Project's proposed drainage plan (including the two [2] proposed drainage basins) included as an applicable City Regulation, the Project would result in the reduction of peak storm water discharge flows compared to existing conditions. Because the proposed Project has been designed to attenuate post-development runoff from the site, Project-related runoff would not substantially increase the rate or amount of surface runoff in downstream areas in a manner that would result in flooding on- or off-site. A less-than-significant impact would occur.

The FEMA FIRM for the Project site indicates that the majority of the Project site is not located within a special flood hazard area, except for Stovepipe Creek which is located within a special flood hazard area. The Project proposes minor modifications to the flood plain limits and the Project Applicant would be required to obtain a CLOMR and LOMR from FEMA to modify the mapped floodplain boundaries. Following the modification of the floodplain boundaries on-site, no development would occur within the revised flood zones. Thus, with implementation of regulatory requirements the Project would not place housing or structures within a 100-year flood hazard area and would not impede or redirect flood flows. Accordingly, the Project's potential to contribute to an impact associated with placing housing or structures within a 100-year flood zone would be less than significant.

Threshold d: Less-than-Significant Impact. Development as proposed by the Project would not occur within any areas that are mapped by FEMA as occurring within a floodplain. As such, the Project would not result in the release of pollutants due to Project inundation. The Project site is located approximately 1.7 miles north of a levee associated with Lake Elsinore, and 4.7 miles northwest of the Railroad Canyon Dam. According to the City of Lake Elsinore General Plan EIR, the Project site is located outside of dam inundation zones. Furthermore, compliance with the City of Lake Elsinore General Plan "Policy and Implementation Plan" applicable to dam inundation included as an applicable City Regulation as well as the construction of the two (2) drainage basins on-site included as an applicable City Regulation would ensure that the Project does not result in the release of pollutants due to any potential dam inundation hazards associated with future development, and impacts would be less than significant. Based on the 1.8-mile distance and change in topography between Lake Elsinore (the nearest large body of water) and the Project site, the Project would not



be subject to inundation by seiches associated with the body of water. Impacts associated with inundation by seiche would be less than significant. Additionally, due to the approximately 25-mile distance of the Project site from the Pacific Ocean, there is no potential for a tsunami to affect the Project site, and no impact would occur.

Threshold e: Less-than-Significant Impact. The proposed Project would require an NPDES Permit, issuance of a WDR by the RWQCB, and Water Quality Certification, which would ensure the Project does not conflict with the Basin Plan. Additionally, the Project site is not located within any sustainable groundwater management plans, and the Project would not affect water quality or the amount of water discharged to local aquifers. Impacts would be less than significant.

4.9.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project is required to comply with the provisions of the Project's NPDES permit, and the Project's SWPPP. Compliance with the NPDES permit and the SWPPP would identify and implement an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges.
- The Project shall be required to comply with the provisions of the Project's Drainage Study and the provisions of the proposed Specific Plan No. 2018-01. Compliance with these provisions would be assured by the City's future review of the Final Map and implementing grading and building permits for compliance with the provisions that require the development of two (2) drainage basins in order to properly attenuate Project-related drainage flows. These provisions would serve to reduce and/or avoid impacts related to hydrology and water quality.
- The Project was reviewed for compliance with General Plan Policy 5.1 and Implementation Program through the preparation of the Project's WQMP. The Project was found to be consistent with General Plan Policy 5.1 and Implementation Program as stated below.
- Policy 5.1: Continue to ensure that new construction in floodways and floodplains conforms to all applicable provisions of the National Flood Insurance Program in order to protect buildings and property from flooding. (Lake Elsinore, 2011a, p. 3-14)
- Implementation Program: Through the project review and the CEQA processes the City shall assess new development and reuse applications for potential flood hazards, and shall require compliance with FEMA Special Flood Hazard Areas where appropriate. (Lake Elsinore, 2011a, p. 3-14)
- The Project shall comply with EIR Mitigation Measure MM 4.4-1, which is presented in EIR Subsection 4.4, *Geology and Soils*, and incorporates all of the requirements listed in the Project's Geotechnical Evaluation (EIR *Technical Appendix D*).



- The Project shall comply with City of Lake Elsinore Municipal Code Chapter 14.08, Stormwater/Urban Runoff Management and Discharge Controls, which intends to protect and enhance the water quality of City watercourses, water bodies, groundwater, and wetlands.
- The Project shall comply with City of Lake Elsinore Municipal Code Chapter 15.64, Flood Damage Prevention, which includes flood construction requirements to minimize flood hazards.
- Prior to issuance of grading permits, the Project Applicant shall obtain a Conditional Letter of Map Revision (CLOMR) from FEMA to modify the floodplain boundaries as shown in FEMA FIRM No. 06065C2928G, dated August 28, 2008. Prior to issuance of building permits, the Project Applicant shall obtain a Letter of Map Revision (LOMR) to reflect the modified flood plain limits resulting from Project implementation.

Mitigation

As discussed in the analysis under Threshold k above, Mitigation Measure MM 4.4-1 from EIR Subsection 4.4, *Geology and Soils*, would apply. Otherwise, impacts to hydrology and water quality as a result of Project implementation would be less than significant, and no additional mitigation is required.



4.10 LAND USE AND PLANNING

This Subsection discusses consistency of the Project with applicable land use and planning policies adopted by the City of Lake Elsinore and other governing agencies for the purpose of reducing adverse effects on the physical environment. Information used to support the analysis in this Subsection was obtained from the City of Lake Elsinore General Plan (Lake Elsinore, 2011a), the Lake Elsinore Municipal Code (Lake Elsinore, 2017), the Southern California Association of Governments' (SCAG's) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG, 2016); and the Regional Conservation Authority (RCA) (RCA, 2003). Refer to EIR Section 7.0, *References*, for a complete list of reference sources.

4.10.1 EXISTING CONDITIONS

A. Existing On-Site Land Uses

Under existing conditions, the southern 27.1 acres of the Project site are vacant while the northern 45.4 acres of the Project site are currently undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan No. 2006-01 (RP 2006-01A2). Reclamation activities include grading and benching of slopes subject to mining, implementation of erosion control measures, and restoration of the site to a more natural appearance. The current topography of the site ranges from approximately 1,294 feet above mean sea level (amsl) in the southwestern portion of the 72.5-acre site to approximately 1,370 feet amsl in the eastern portion of the site; however, following reclamation elevations on-site would range from 1,294 to 1,323 feet amsl. For purposes of analysis herein, the existing condition of the northern 45.4 acres of the Project site is the reclaimed condition of the Project site because no development may occur on this portion of the site until reclamation activities have been completed to the satisfaction of the Division of Mine Reclamation (DMR). Impacts associated with reclamation activities on the northern portions of the site were fully evaluated in a previously-certified EIR for Surface Mining Permit No. 2015-01 and RP 2006-01A1 (SCH No. 2006051034), which is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and is available for review at the City of Lake Elsinore Planning Division 120 South Main Street, Lake Elsinore, CA 92530. Additionally, the Project site is traversed by Stovepipe Creek, which generally crosses the site in a northeast-to-southwest orientation.

B. Existing Land Use Designations

As previously illustrated in Figure 2-5, *Existing General Plan Land Use Designations*, the City of Lake Elsinore General Plan Land Use Map applies land uses over the entire 72.5-acre propriety. As shown, the City's General Plan designates the northern 45.4 acres of the Project site as "Specific Plan" with an "Extractive Overlay" applied to the majority of the northern portions of the site. The northern 45.4 acres of the Project site are located within the Alberhill Ranch Specific Plan (ARSP), which designates the site for "Commercial – Specific Plan" land uses and allows for up to 380,000 s.f. of commercial retail uses. The southern 27.1 acres of the Project site are designated by the General Plan for "General Commercial" land uses which allows for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. (Lake Elsinore, 2011a, Figure 2.1A; Lake Elsinore, 1997, p. 7)



At the time the General Plan EIR was certified in 2011, the northern 45.4 acres of the Project site were located within the City of Lake Elsinore, while the southern 27.1 acres were located within Riverside County. The southern 27.1 acres of the Project site were annexed along with other lands into the City of Lake Elsinore on November 10, 2016 (Annexation No. 83) (RLAFCO, 2016). Per the requirements of Government Code § 56375(e), there is a two-year prohibition on changing the land use on an area annexed into a city. Thus, the earliest the land use could be redesignated for the southern 27.1 acres of the Project site would be November 10, 2018.

As previously illustrated in Figure 2-6, *Existing Zoning Designations*, the City of Lake Elsinore Zoning Map designates the northern 45.4 acres of the Project site as “Alberhill Ranch Specific Plan,” which pursuant to the ARSP allows for up to 380,000 s.f. regional general commercial uses. The southern 27.1 acres of the Project site are zoned for “Commercial Mixed Use (CMU),” which allows for “a mix of land uses in a compact, high quality, pedestrian-friendly, interactive pattern.” (Lake Elsinore, 2014; Lake Elsinore, 2017, Chapter 17.134; Lake Elsinore, 1997, p. 7)

C. Surrounding Land Uses

Surrounding land uses were shown previously on Figure 2-4, *Aerial Photograph*. The Project site is located in a portion of the City that contains vacant lands, residential, school, and commercial land uses. Immediately north of the Project site is Nichols Road, beyond which is an active mining operation and open space. To the west of the site is I-15 freeway, beyond which is the Lake Elsinore Outlet Center. To the south of the site is the Temescal Canyon High School. To the east of the site are single-family homes. (Google Earth, 2016)

Existing General Plan land use designations north of the Project site include “Specific Plan,” “Open Space,” and “Hillside Residential.” Lands to the east of the Project site are designated as “Hillside Residential” and “Low Density Residential” by the Riverside County General Plan. Properties located to the west of the Project site are designated as “Specific Plan.” Lands to the south of the Project site are designated as “Public Institutional” and “Specific Plan” (Lake Elsinore, 2011a, Figure 2.1A)

Figure 2-6 depicts the existing zoning classifications at the site, and shows lands to the north and west of the Project site are zoned as “Alberhill Ranch Specific Plan.” Properties to the south of the Project site are zoned as “Public/Institutional”. Properties located east of the Project site are within unincorporated Riverside County and are zoned as “Residential Agricultural (R-A-10)” and “Residential Agricultural (R-A-2000).” (Lake Elsinore, 2014)

D. Applicable Land Use and Planning Policies

1. City of Lake Elsinore General Plan

The City of Lake Elsinore General Plan, approved in 2011, is a policy document that reflects the City’s vision for the future of Lake Elsinore. The General Plan is organized into four overall Chapters, including: Introduction; Community Form; Public Safety and Welfare; and Resource Protection and Preservation. Each General Plan Chapter is instrumental to achieving the City’s long-term development goals. Each Chapter contains a series of policies that guide the course of action the City must take to achieve the City’s vision for future development.



In addition, the General Plan divides the City into 16 District Plans. The purpose of these District Plans is to provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas. The northern 45.4 acres of the Project site are located within the Alberhill District, while the southern 27.1 acres of the Project site are located within the North Central Sphere District. The following sections provides a summary of each General Plan Chapter, the Alberhill District Plan, and the North Central Sphere District Plan.

Community Form

The General Plan Community Form Chapter functions as a guide to planners, the general public, and decision makers as to the ultimate pattern of development within the City. The Community Form Chapter contains a “Strategic Framework for 2030” which provides an overall structure to identify policies that guide the City. The Strategic Framework provides a mechanism to explain how the individual elements of the General Plan fit together, how the General Plan is to be implemented through regulatory framework to achieve its policies, and provides a vision for the foreseeable future. The Strategic Framework includes the following Elements: Land Use; Circulation; Growth Management; Housing Element; Community Facilities and Protection Services (included in Chapter 2 of the General Plan); Parks and Recreation; and Historic Preservation (included in Chapter 4 of the General Plan).

The Land Use Element designates the general distribution, general location, and extent of land uses, such as housing, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses. For each of the various land use designations, the General Plan provides standards for residential density and non-residential intensity, and provides specific policies intended to ensure that residential product types, densities, and intensities respond to a multitude of market segments. The Land Use Element governs how land is to be utilized; therefore, many of the issues and policies contained in other plan elements are linked in some degree to this element. The northern 45.4 acres of the Project site are located within the ARSP which designates the site for “Commercial – Specific Plan” land uses and allows for up to 380,000 s.f. of commercial retail uses. The southern 27.1 acres of the Project site are designated by the General Plan for “General Commercial” land uses which allows for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. (Lake Elsinore, 2011a, p. 2-2)

The purpose of the Circulation Element is to provide for the movement of goods and people, including pedestrians, bicycles, transit, train, air, and automobile traffic flows within and through the community. The Circulation Element designates future road improvements and extensions; addresses non-motorized transportation alternatives; and identifies funding options. The various roadway improvements and extensions contemplated by the Circulation Element are reflected on the General Plan Circulation Plan. The various roadway classifications depicted on the Circulation Plan correspond to specific roadway cross-sections, which provide specific standards for right-of-way widths, lane configurations, medians, and landscaping requirements. The only roadway in the immediate Project vicinity that is designated as part of the General Plan Circulation Element is Nichols Road, which is classified as an “Urban Arterial (6-Lanes/120-foot ROW).” The Circulation Element also identifies



the location of all existing and planned trails in the Project's vicinity and includes a bikeway plan. The Circulation Element identifies a "Riverside County Regional Trail" within the southern portion of the Project site along Stovepipe Creek and a "Lake Elsinore Regional Trail" along Nichols Road abutting the Project's northern boundary. The Circulation Element also identifies a Class II bike lane along Nichols Road which abuts the Project's northern boundary. (Lake Elsinore, 2011a, Figure 2.3)

The Growth Management Element provides goals and policies to ensure that public services do not lag behind population growth and the concomitant demands created by a larger population. The Growth Management Element aids in anticipating the demands for public services and infrastructure to establish adequate services and infrastructure at a rate that meets the rate of new construction in the City. The goals and policies in this section are designed to provide the framework for a growth management strategy that promotes and maximizes mobility, livability, prosperity, and sustainability in the City. (Lake Elsinore, 2011a, pp. 2-41, 2-42)

The 2014-2021 Housing Element identifies and establishes City policies intended to fulfill the housing needs of existing and future residents in the City of Lake Elsinore. It establishes policies that guide City decision making and set forth an action plan to implement its housing goals. The Housing Element includes policies, programs, and incentives including: identification of existing and projected housing needs; resources and constraints; a statement of goals, policies, quantified objectives and scheduled programs for preservations, improvements, and development of housing; adequate provision for existing and projected needs of all economic segments of the community; and identification of adequate sites for housing. (Lake Elsinore, 2013, p. 1)

The Parks and Recreation Element includes goals and policies designed to provide the City with the tools and opportunities necessary to create a recreational destination and foster community building for the City of Lake Elsinore. The City acknowledges the relationship of recreation to aspects of social, cultural, and economic benefits to the community and the role of these benefits in the planning process for parks and recreational facilities and programs. Historically, Lake Elsinore has been regarded as a recreational destination for the Inland Empire partly because of the City's natural resources such as the lake, mountains, and rugged hillsides. The goals and policies in this section are designed to provide adequate parks and recreational facilities for residents and visitors. (Lake Elsinore, 2011a, pp. 2-43 to 2-48)

Public Safety and Welfare

The Public Safety and Welfare Chapter of the General Plan addresses public safety and welfare issues within the City and the Sphere of Influence (SOI), including: air quality; fire and police/law enforcement; community facilities and services; hazards; and noise. The focus is on maintaining a healthy and safe physical environment and ensuring community welfare through access to effective and efficient high-quality public services. (Lake Elsinore, 2011a, p. 3-1)



Resource Protection and Preservation

The Resource Protection and Preservation Chapter of the General Plan addresses resource protection and preservation issues within the City and the SOI related to biological resources; open space; water resources; cultural and paleontological resources; and aesthetic resources. The Resource Protection and Preservation Chapter also contains discussion and figures that detail the locations of water resources, vegetation communities, mineral resources, and cultural resources within the City. Together with the Multiple Species Habitat Conservation Plan (described below), the Resources Protection and Preservation Chapter seeks to preserve and protect identified resources in order to maintain or improve environmental quality. (Lake Elsinore, 2011a, Chapter 4.0)

Alberhill District Plan

The northern 45.4 acres of the Project site is located within the Alberhill District Plan. The Alberhill District is a component of the Lake Elsinore General Plan, bordered by the Lake View District, Country Club Heights District, and Business District to the south; the North Central Sphere to the east; and Northwest Sphere District to the west and north. The Alberhill District is planned to transition from a concentrated mining area into a network of residential, commercial, industrial, and mixed-use communities. The main concept of the Alberhill District Plan is a coordinated and balanced set of communities with supporting uses that maintain a high quality of life. The goals and policies contained within the Alberhill District Plan reflect the general intentions of the City adopted specific plans for those areas. (Lake Elsinore, 2011a, p. AH-1)

As shown on Alberhill District Plan Figure AH-1, *Alberhill District Land Use Plan*, the portion of the Project site within the Alberhill District Plan is designated for Specific Plan uses and the majority of the area is also located within the Extractive Overlay (Lake Elsinore, 2011a, Figure AH-1). The purpose of the Extractive Overlay is to provide for continued operations of extractive uses, such as aggregates, coal, clay mining, and certain ancillary uses. (Lake Elsinore, 2011a, p. 2-18)

North Central Sphere District

The southern 27.1 acres of the Project site are located within the North Central Sphere District Plan. The North Central Sphere District is a component of the Lake Elsinore General Plan, bordered by the North Peak, Lake Elsinore Hills, Business, and Alberhill Districts to the east, south, southeast, and west, respectively. The area north of the North Central Sphere District falls outside of the Sphere of Influence of the City. The main focus of the North Central Sphere District Plan is to preserve existing natural resources, ensure residential development incorporates the surrounding landscape, and ensure that business activities in the District are compatible with surrounding land uses. The goals and policies contained within the North Central Sphere District Plan focus on supporting development while preserving the topography and views in the North Central Sphere District. As shown on North Central Sphere District Plan Figure NCS-1, *North Central Sphere District Land Use Plan*, the portion of the Project site within the North Central Sphere District Plan is designated for General Commercial uses. (Lake Elsinore, 2011a, p. NCS-1 and Figure NCS-1)



2. City of Lake Elsinore Zoning Ordinance

The City of Lake Elsinore Zoning Ordinance, which is part of the City's Municipal Code, assigns a zoning classification to all properties inside the City's boundaries. The Zoning Ordinance is intended to implement the City of Lake Elsinore General Plan's Land Use Plan. As previously indicated and as shown on Figure 2-6, the City of Lake Elsinore Zoning Map designates the northern 45.4 acres of the Project site as "Alberhill Ranch Specific Plan," which pursuant to the ARSP allows for up to 380,000 s.f. regional general commercial uses. The southern 27.1 acres of the Project site are zoned for "Commercial Mixed Use (CMU)," which allows for "a mix of land uses in a compact, high quality, pedestrian-friendly, interactive pattern." (Lake Elsinore, 2014; Lake Elsinore, 2017, Chapter 17.134; Lake Elsinore, 1997, p. 7)

3. Southern California Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to CA Gov. Code § 6500, Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG serves as an area-wide clearinghouse for regionally significant projects. SCAG reviews the consistency of local plans, projects, and programs with regional plans. Guidance provided by this review process is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

The Project site is located within the Western Riverside Council of Governments (WRCOG) sub-region of SCAG. The applicable SCAG policy documents include the Regional Comprehensive Plan and Guide (2016), the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), and Compass Growth Vision. Because the proposed Project meets the CEQA definition of having a statewide, regional, or area-wide significance, the proposed Project is subject to an individual consistency evaluation with regional plans such as those published by SCAG.

4. South Coast Air Quality Management District Air Quality Management Plan (SCAQMD AQMP)

California Health & Safety Code § 40702 et seq., the California Clean Air Act, requires that an Air Quality Management Plan (AQMP) be developed and then updated every three years for air basins with non-attainment status. As discussed in EIR Section 4.2, *Air Quality*, the Project site is located in the South Coast Air Basin (SCAB). The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and State air quality standards. Air quality within the SCAB is regulated by the SCAQMD and standards for air quality are documented in the SCAQMD's 2016 AQMP. Although air quality in the SCAB has improved over the past several decades, according to the SCAQMD, the SCAB currently does not meet the National Air Quality Standards (NAAQS) attainment status for ozone (O₃) and particulate matter less than 2.5 microns (PM_{2.5}). The SCAB's designation for lead is currently nonattainment (partial) and a revaluation of attainment status was requested, with the final determination pending. The SCAB does not meet the California Ambient Air Quality Standards (CAAQS) attainment status for ozone (O₃), particulate matter <2.5 microns (PM_{2.5}), and particulate matter <10 microns (PM₁₀) as nonattainment. (SCAQMD, 2017a)



The SCAQMD AQMP is a plan for the regional improvement of air quality. Projects such as the proposed Project relate to the air quality planning process through the growth forecasts that were used as inputs into the regional transportation model. If a proposed project is consistent with these growth forecasts, and if all available emissions reduction strategies are implemented as effectively as possible on a project-specific basis, then the project is consistent with the AQMP.

4.10.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, State, and local environmental laws and related regulations associated with land use and planning.

B. Federal Regulations

1. Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2018a)

2. Federal Aviation Regulations Part 77

Federal Regulation Title 14 Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification serves as the basis for:

- Evaluating the effect of the construction or alteration on operating procedures;
- Determining the potential hazardous effect of the proposed construction on air navigation;
- Identifying mitigating measures to enhance safe air navigation; and
- Charting of new objects. (FAA, 2017)

Notification allows the Federal Aviation Administration (FAA) to identify potential aeronautical hazards in advance to prevent or minimize the adverse impacts to the safe and efficient use of navigable airspace. Any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA (FAA, 2017):

- Any construction or alteration exceeding 200 feet above ground level.
- Any construction or alteration:



- within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet.
 - within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 feet.
 - within 5,000 feet of a public use heliport which exceeds a 25:1 surface.
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed that above noted standards.
- When requested by the FAA.
- Any construction or alteration located on a public use airport or heliport regardless of height or location. (FAA, 2017)

Persons failing to comply with the provisions of FAR Part 77 are subject to Civil Penalty under Section 902 of the Federal Aviation Act of 1958, as amended and pursuant to 49 U.S.C. Section 46301(a). (FAA, 2017)

C. State Regulations

1. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 et seq.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs)



can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014)

2. *California Water Code*

The California Water Code is the principle state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the Regional Water Quality Control Board (RWQCB), water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

3. *California Planning and Zoning Law*

The legal framework in which California cities and counties exercise local planning and land use functions is set forth in the California Planning and Zoning Law, §§ 65000 - 66499.58. Under State of California planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. These requirements include the inclusion of seven mandatory elements described in the Government Code, including a section on land use. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals; diagrams and maps that incorporate data and analysis; and mitigation measures.



4. *Subdivision Map Act*

The Subdivision Map Act (“Map Act”) vests in the cities and counties the power to regulate and control the design and improvement of subdivisions within its boundaries. Each city must adopt an ordinance regulating and controlling subdivisions for which the Map Act requires a tentative and final or parcel map. The authority for a city or county to regulate land use, including subdivisions, flows from the general police power. However, the Map Act sets forth certain mandates that must be followed for subdivision processing. A city can impose conditions on the subdivision process when the Map Act is silent, but it cannot regulate contrary to specific provisions contained in the Map Act. (Curtin, Jr. & Merritt, 2002, p. 1) The Map Act’s primary goals are:

- To encourage orderly community development by providing for the regulation and control of the design and improvement of the subdivision, with a proper consideration of its relation to adjoining areas;
- To ensure that the areas within the subdivision that are dedicated for public purposes will be properly improved by the subdivider so that they will not become an undue burden on the community; and
- To protect the public and individual transferees from fraud and exploitation. (Curtin, Jr. & Merritt, 2002, p. 1)

The Map Act is applied in conjunction with other state land use laws such as the general plan, specific plans, zoning, CEQA, and the Permit Streamlining Act. The Map Act provides for regulation of land divisions by a city or county and is interpreted and enforced by the city or county. (Curtin, Jr. & Merritt, 2002, p. 2)

5. *Office of Planning and Research (OPR) General Plan Guidelines*

Each city and county in California must prepare a comprehensive, long term general plan to guide its future. To assist local governments in meeting this responsibility, the Governor’s Office of Planning and Research (OPR) is required to adopt and periodically revise guidelines for the preparation and content of local general plans pursuant to Government Code § 65040.2. The General Plan Guidelines is advisory, not mandatory. Nevertheless, it is the state’s only official document explaining California’s legal requirements for general plans. Planners, decision-making bodies, and the public depend upon the General Plan Guidelines for help when preparing local general plans. The courts have periodically referred to the General Plan Guidelines for assistance in determining compliance with planning law. For this reason, the General Plan Guidelines closely adheres to statute and case law. It also relies upon commonly accepted principles of contemporary planning practice. (OPR, 2017, p. 1)

6. *State Aeronautics Act*

The State Aeronautics Commission Act of 1947 created the Division of Aeronautics (“Division”), and was later amended by statute to read the State Aeronautics Act (Aeronautics Act) in 1961. As a result of this legislation, the Division’s first priorities are those mandated by the Aeronautics Act, then Caltrans guidance, then Division guidance as expressed through its Policy Element. As directed by the Aeronautics Act, the Division is a steward and advocate of aviation in California. To that end, its efforts are focused on activities that “protect the public interest in aeronautics and aeronautical progress.” (§ 21002) (Caltrans, 2016, p. 1-2)



The Aeronautics Act itself is divided into six chapters, the first five of which have not received significant cleanup legislation since its enabling in 1947. The first chapter begins with general provisions and definitions and explains the Legislature's intent for a State aviation program. Chapter two explains Caltrans' role in administering the Division, and explains the role of the California Transportation Commission (CTC). Chapter three includes many of the safety considerations from Federal Aviation Administration (FAA) regulations that help keep airports and the surrounding communities safe and compatible with flight operations. Chapter four deals with airport and heliport permitting, air navigation facilities, noise guidelines, funding, and importantly, the formation and authority of Airport Land Use Commissions (ALUC). Chapter five covers the investigations and hearings on matters covered in the Aeronautics Act. Finally, Chapter six introduces airport planning and specifically introduces the intent of the CASP and how it can be used to support California aviation. (Caltrans, 2016, p. 1-2)

D. Local Regulations

1. Lake Elsinore Municipal Code (LEMC) – Title 14, Chapter 14.08

The purpose of this chapter is to ensure the future health, safety, and general welfare of City citizens by:

- Reducing pollutants in stormwater discharges to the maximum extent practicable;
- Regulating illegal connections and discharges to the storm drain system; and
- Regulating non-stormwater discharges to the storm drain system.

The intent of this chapter is to protect and enhance the water quality of City watercourses, water bodies, groundwater, and wetlands in a manner pursuant to and consistent with the Federal Clean Water Act (33 USC 1342). [Ord. 1004 Art. I § 2, 1995]. (Lake Elsinore, 2011b, p. 3.8-34)

2. Lake Elsinore Municipal Code (LEMC) – Title 5, Chapter 5.116

The City has in place a palm tree preservation program, which was adopted as City Ordinance No. 1044. and codified as Chapter 5.116 of the Lake Elsinore Municipal Code. The purpose of the program is for the protection of the City's plant life heritage for the benefit of all citizens in Lake Elsinore. The City recognizes the value of significant palm trees (Canary Island Date Palm, California Fan Palm, Windmill Palm, Mediterranean Fan Palm, Senegal Date Palm, Pindo Palm and Pygmy Palm) within the City of Lake Elsinore as natural aesthetic resources, which help define the history and character of the City. All residents who wish to remove a palm tree that exceeds five feet in height measured from the ground at the base of the trunk to the base of the crown must obtain a palm tree removal permit prior to removal of the tree. (Lake Elsinore, 2011b, p. 3.8-34)

4.10.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to land use and planning if the Project or any Project-related component would:

- a. Physically divide an established community;*



- b. *Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; or*

The above listed thresholds are derived directly from Section XI of Appendix G to the CEQA Guidelines and address typical adverse effects to land use and planning (OPR, 2018).

4.10.4 **IMPACT ANALYSIS**

Threshold a: Would the Project physically divide an established community?

Under existing conditions, the southern 27.1 acres of the Project site are vacant while the northern 45.4 acres of the Project site are currently undergoing reclamation activities. Under existing conditions, residential uses occur only to the east of the Project site. Future residential development as proposed by the Project would not result in the physical division of any of the existing nearby residential neighborhoods to the east, as the future development of up to 168 residential dwelling units and commercial uses on-site would provide public roadways and pedestrian/bicycle connections within and through the Project site. Additionally, no residential neighborhoods occur to the north, west, or south. Accordingly, the proposed Project would have no potential to physically divide an established community, and no impact would occur.

Threshold b: Would the Project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

The proposed Project has the potential to conflict with the City of Lake Elsinore General Plan, City of Lake Elsinore Zoning Ordinance, and the SCAG 2016-2040 RTP/SCS. Each is discussed below. Project consistency with the SCAQMD AQMP was addressed under EIR Subsection 4.2, *Air Quality*, under the discussion and analysis of Threshold a., and is not discussed below.

City of Lake Elsinore General Plan

A discussion of the Project's consistency with each Chapter and Element of the City of Lake Elsinore General Plan is provided below.

Community Form-Land Use Element

The Land Use Element designates the general distribution, general location, and extent of land uses, such as housing, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses. The General Plan Land Use Map (General Plan Figure 2.1A) designates the northern 45.4 acres of the Project site as "Specific Plan" with an "Extractive Overlay" applied to the majority of the northern portions of the site. The northern 45.4 acres of the Project site are located within the Alberhill Ranch Specific Plan (ARSP), which designates the site for "Commercial – Specific Plan" land uses. The southern 27.1 acres of the Project site are designated by the General Plan for "General Commercial" land uses. As previously noted under Subsection A.1, the southern 27.1 acres of the Project site were annexed into the City of Lake Elsinore in 2016. The Project proposes development of 168 single-family residential homes, 14.5 acres of commercial uses, and 8.3 acres of recreational uses. Although the proposed Project would be inconsistent with the General



Plan Land Uses for the Project site, the Project proposes a General Plan Amendment (GPA No. 2018-01). Environmental impacts associated with GPA 2018-01 have been evaluated under the relevant issue areas throughout this EIR. Under each of these topics, the Project's impacts are determined to be less than significant, or mitigation measures have been imposed to reduce impacts to the maximum feasible extent. There are no components of GPA 2018-01 that have not already been addressed and accounted for throughout this EIR.

Per the requirements of Government Code § 56375(e), there is a two-year moratorium on changing the land use within an area annexed into a city. Thus, the earliest the land use could be redesignated for the southern 27.1 acres of the Project site would be November 10, 2018. The Project is not be anticipated to be presented at a public hearing until after November 10, 2018, at which time the Project's proposed General Plan Amendment (GPA No. 2018-01) application could be considered.

Thus, although the Project proposes dwelling units and less retail space than assumed by the General Plan, there are no adverse environmental effects associated with such changes that have not already been evaluated and addressed throughout this EIR. The Project would be consistent with all of the policies contained within the Land Use Element. Accordingly, the Project would not conflict with the General Plan Land Use Element exhibits or policies, and impacts would be less than significant. (Lake Elsinore, 2011a, p. 2-2)

Community Form-Circulation Element

The purpose of the Circulation Element is to provide for the movement of goods and people, including pedestrians, bicycles, transit, train, air and automobile traffic flows within and through the community. The Circulation Element designates future road improvements and extensions; addresses non-motorized transportation alternatives; and identifies funding options. The various roadway improvements and extensions contemplated by the Circulation Element are reflected on Figure 2.3 of the Community Form Chapter. Roadway facilities in the immediate Project vicinity that are designated as part of the General Plan Circulation Element include Nichols Road, which is classified as an "Urban Arterial (6-Lanes/120-foot ROW)" (Lake Elsinore, 2011a, Figure 2.3). As shown previously on Figure 3-3, the Project proposes to construct half width improvements to Nichols Road along the Project's frontage, and would provide for 48 feet of drive lanes, a six-foot wide curb-adjacent sidewalk within a 12-foot landscaped parkway, and an asphalt and concrete berm along the northern edge of the proposed improvements. As proposed by the Project, a transition from the half-width of the ultimate ROW to the two-lane roadway would be constructed between planned improvements along most of the Project's frontage and the existing improved section of roadway adjacent to Planning Areas 2 and 10. The Project would construct 30-feet of interim ROW within the southern half of the Nichols Road ROW. The Project would construct two 15-foot travel lanes, a 5-foot sidewalk on the southern side of the ROW, and a proposed interim rock channel, 1.5:1 ratio slope, and a proposed brow ditch. Improvements to the northern edge of Nichols Road and east of the site would occur by others in the future. Thus, the Project would be fully consistent with Figure 2.3 of the Community Form Chapter.

The Circulation Element also contemplates improvements to bicycle and pedestrian facilities, which are reflected in Figure 2.5 and 2.6 of the Community Form Chapter, respectively. The General Plan Circulation Element plans for a Class II bicycle lane along both sides of Nichols Road, directly north of the Project. The Circulation Element identifies a "Riverside County Regional Trail" within the southern portion of the Project



site along Stovepipe Creek and a “Lake Elsinore Regional Trail” along Nichols Road abutting the Project’s northern boundary. The Project accommodates half-width frontage improvements including a 6-foot wide Class II bicycle lane on the southern edge of the roadway. The Class II bicycle lane along the northern edge of Nichols Road would be built by others in the future. Thus, the Project would be fully consistent with Figure 2.5 of the Community Form Chapter. The Project includes a curb-separated sidewalk along Nichols Road abutting the Project’s northern boundary, a trail along Stovepipe Creek within Planning Area 8, and a trail along Stovepipe Creek within Planning Area 10. The trail within Planning Area 8 would connect to planned pedestrian facilities on “B” Street and would provide pedestrian connectivity north to the trail in Planning Area 10, and further north to the pedestrian facilities in Nichols Road. The regional trail within the Project site would provide connection to Nichols Road which would provide a connection to future regional trail projects in accordance with Figure 2.6 of the Circulation Element.

The Project would be consistent with or otherwise would not conflict with the goals and policies set forth in the Circulation Element. Accordingly, the Project would not conflict with the Circulation Element, and impacts would be less than significant. (Lake Elsinore, 2011a)

Community Form-Growth Management Element

The Growth Management Element provides goals and policies to ensure that public services do not lag behind population growth and the concomitant demands created by a larger population. The Growth Management Element aids in anticipating the demands for public services and infrastructure to establish adequate services and infrastructure at a rate that meets the rate of new construction in the City. The Project’s impacts to public services have been evaluated in EIR Subsection 4.13, *Public Services*, and where potential impacts associated with public services are identified, the EIR identifies mitigation measures, standard regulatory requirements, or Project design features that would reduce impacts to less-than-significant levels. There are no potential impacts to public services affecting the Project site that have not already been discussed by this EIR. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Growth Management Element. Therefore, impacts due to a conflict with the Growth Management Element would be less than significant. (Lake Elsinore, 2011a, pp. 2-41, 2-42)

Community Form-Housing Element

The 2014-2021 Housing Element identifies and establishes City policies intended to fulfill the housing needs of existing and future residents in the City of Lake Elsinore. The Housing Element is separated into five key sections Community Profile and Housing Needs Assessment; Housing Constraints Analysis; Housing Resources-Site Inventory and Analysis; Housing Element Plan; and Review of Past (2008-2014) Accomplishments. The proposed Project would relate directly to the Housing Element Plan portion of the Housing Element. Included within the Housing Element Plan are a series of goals relating to housing diversity, neighborhood quality, and housing assistance. The Project would be consistent with or otherwise would not conflict with any of the adopted Housing Element goals. Additionally, the Project would provide for up to 168 single-family residential homes, which would assist the City in meeting its share of the regional housing need. Accordingly, the Project would not conflict with the Housing Element, and impacts would be less than significant. (Lake Elsinore, 2013, p. 1)



Community Form-Parks and Recreation Element

The Parks and Recreation Element includes goals and policies designed to provide the City with the tools and opportunities necessary to create a recreational destination and foster community building for the City of Lake Elsinore. Policy 8.2 of the Community Form Chapter requires 5.0 acres of useable park land be provided per 1,000 residents in the City of Lake Elsinore. The Project would construct parks on-site in compliance with the requirements of Policy 8.2. Specifically, the Project is anticipated to generate approximately 628 future residents (refer to EIR subsection 3.3.2), which would generate a demand for 3.1 acres of parkland (628 persons x 5.0 acres parkland/1,000 persons = 3.1 acres). The Project accommodates approximately 8.3 acres of recreation uses, and therefore exceeds the population-based requirements of Policy 8.2. Figure 2.8 of the Community Form Chapter identifies existing and proposed parks throughout the City; however, the Project site is not identified as a location for any existing or proposed parks. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Parks and Recreation Element, and impacts would be less than significant. (Lake Elsinore, 2011a, pp. 2-43 to 2-48)

Public Safety and Welfare

The Public Safety and Welfare Chapter of the General Plan addresses public safety and welfare issues, including: air quality; fire and police/law enforcement; community facilities and services; hazards; and noise within the City and the Sphere of Influence. These topical areas have been evaluated throughout this EIR, and where potential impacts associated with safety hazards are identified the EIR identifies mitigation measures, standard regulatory requirements, and/or Project design features that would reduce impacts to less-than-significant levels. There are no potential safety hazards affecting the Project site or surrounding areas that have not already been addressed by this EIR. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Public Safety and Welfare Chapter. Therefore, impacts due to a conflict with the Public Safety and Welfare Chapter would be less than significant. (Lake Elsinore, 2011a, p. 3-1)

Resource Protection and Preservation

The Resource Protection and Preservation Chapter of the General Plan addresses resource protection and preservation issues related to biological resources; open space; water resources; cultural and paleontological resources; and aesthetic resources within the City and the SOI. These topical areas have been evaluated throughout this EIR, and where potential impacts associated with resource protection and preservation are identified, the EIR identifies mitigation measures, standard regulatory requirements, or Project design features that would reduce impacts to the maximum feasible extent. There are no potential resource protection and preservation policies affecting the Project site or surrounding areas that have not already been addressed by this EIR. Additionally, the Project would be consistent with or otherwise would not conflict with the goals and policies of the Resource Protection and Preservation Chapter. Therefore, impacts due to a conflict with the Resource Protection and Preservation Chapter would be less than significant. (Lake Elsinore, 2011a, Chapter 4.0)



Alberhill District Plan

The main concept of the Alberhill District Plan is a coordinated and balanced set of communities with supporting uses that maintain a high quality of life. The goals and policies contained within the Alberhill District Plan reflect the general intentions of the City adopted specific plans for those areas. The northern 45.4 acres of the Project site are located within the ARSP, which designates the site for “Commercial – Specific Plan” land uses. Although the Project proposes more dwelling units and less retail space than assumed by the General Plan. The Project proposes a General Plan Amendment (GPA 2018-01), Specific Plan Amendment (SPA No. 2017-03), and Specific Plan (SP No. 2018-01) to change the site’s land use designation to allow for residential and commercial uses. There are no adverse environmental effects associated with such changes that have not already been evaluated and addressed throughout this EIR. The Project would be consistent with the goals of the Alberhill District Plan, including the goal to support and maintain a healthy transition from extractive/mining activities to a network of residential communities with a balanced mixed of residential and commercial uses. The Project would be consistent with or otherwise would not conflict with the goals and policies of the Alberhill District Plan. Therefore, impacts due to a conflict with the Alberhill District Plan would be less than significant. (Lake Elsinore, 2011a, p. AH-1)

North Central Sphere District

The main focus of the North Central Sphere District Plan is to preserve existing natural resources, ensure residential development incorporates the surrounding landscape, and ensure that business activities in the District are compatible with surrounding land uses. The goals and policies contained within the North Central Sphere District Plan focus on supporting development while preserving the topography and views in the North Central Sphere District. The southern 27.1 acres of the Project site are located within the North Central Sphere District Plan, which designates the site for “General Commercial” land uses. Although the Project proposes more dwelling units and less retail space than assumed by the General Plan. The Project proposes a General Plan Amendment (GPA 2018-01) and Specific Plan (SP No. 2018-01) to change the site’s land use designation to allow for residential, commercial, and recreational uses. There are no adverse environmental effects associated with such changes that have not already been evaluated and addressed throughout this EIR. The Project would be consistent with the goals of the North Central Sphere District Plan, including the goal to make planned residential and professional uses compatible with the surrounding development. The Project would be consistent with or otherwise would not conflict with the goals and policies of the North Central Sphere District Plan. Therefore, impacts due to a conflict with the North Central Sphere District Plan would be less than significant. (Lake Elsinore, 2011a, p. NCS-1)

Conclusion

As demonstrated in the preceding analysis, the Project would not conflict with any General Plan goals, policies, or requirements. Additionally, the Project would not result in any significant environmental impacts resulting from a conflict with the General Plan. Accordingly, impacts due to a conflict with the General Plan would be less than significant.



□ Project Consistency with City of Lake Elsinore Municipal Code

Zone Change (ZC 2018-01) proposes to modify the zoning designation on the southern 27.1 acres of the site from “Commercial Mixed Use (CMU)” to “Nichols Ranch Specific Plan.” ZC No. 2018-01 also would change the zoning designation of the northern 45.4 acres of the site from “Alberhill Ranch Specific Plan” to “Nichols Ranch Specific Plan.” Additionally, ZC No. 2018-01 would establish allowable uses and development standards for the 72.5-acre proposed Nichols Ranch Specific Plan area.

Although the proposed Project would be inconsistent with the Zoning Ordinance’s existing “Alberhill Ranch Specific Plan” and “Commercial Mixed Use” zoning designations, such inconsistencies would only be significant if it were to result in significant, adverse physical effects to the environment that would not likely otherwise occur with implementation of the proposed Zone Change. As disclosed in this EIR, implementation of the proposed Project would develop the subject property with residential, commercial, and recreational uses, which would result in adverse effects to the environment. This EIR provides mitigation measures for each EIR issue area where necessary to reduce the Project’s effects to the environment to the maximum feasible extent. Accordingly, the Project’s inconsistency with the City of Lake Elsinore Zoning Ordinance’s “Alberhill Ranch Specific Plan” and “Commercial Mixed Use” zoning designations is considered less than significant.

□ Project Consistency with the SCAG 2016-2040 RTP/SCS

The SCAG Regional Council adopted the 2016-2040 RTP/SCS in April 2016. The 2016 RTP/SCS seeks to improve mobility, promote sustainability, facilitate economic development and preserve the quality of life for the residents in the region. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in the 2016 RTP/SCS are pertinent to the proposed Project. These goals are meant to provide guidance for considering the proposed Project within the context of regional goals and policies. An analysis of the Project’s consistency with the relevant goals of the 2016 RTP/SCS are presented below in Table 4.10-1, *Analysis of Consistency with SCAG 2016-2040 RTP/SCS Goals*. As indicated the Project would not conflict with any of the RTP/SCS goals and impacts due to a conflict would be less than significant.

Table 4.10-1 Analysis of Consistency with SCAG 2016-2040 RTP/SCS Goals

RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G1	Align the plan investments and policies with improving regional economic development and competitiveness.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive local and regional planning efforts.
G2	Maximize mobility and accessibility for all people and goods in the region.	<u>No inconsistency identified.</u> EIR Subsection 4.14, <i>Transportation and Traffic</i> , evaluates Project-related traffic impacts and specifies mitigation measures to ensure that roadway and intersection and intersection improvements needed to accommodate Project traffic volumes are implemented concurrent with proposed development, to the extent feasible.



RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G3	Ensure travel safety and reliability for all people and goods in the region.	<u>No inconsistency identified.</u> As disclosed in Subsection 4.15, <i>Transportation and Traffic</i> , there is no component of the proposed Project that would result in a substantial safety hazard to motorists (refer to analysis under Threshold d in subsection 4.15.4.) Furthermore, EIR Subsection 4.15 specifies mitigation measures to ensure that roadway and intersection improvements meet safety standards and operate as efficiently as is feasible.
G4	Preserve and ensure a sustainable regional transportation system.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of the overall planning and maintenance of the regional transportation system. The Project would have no adverse effect on such planning or maintenance efforts.
G5	Maximize the productivity of our transportation system.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive transportation planning efforts. The Project would be consistent with the City of Lake Elsinore General Plan Circulation Element, which meets this goal to maximize productivity.
G6	Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	<u>No inconsistency identified.</u> An analysis of the Project's environmental impacts is provided throughout this EIR, and mitigation measures are specified where warranted. Air quality is addressed in EIR Subsection 4.2, <i>Air Quality</i> , and mitigation measures are specified to reduce the Project's air quality impacts to the extent feasible. Additionally, and as discussed in EIR Subsection 4.5, <i>Greenhouse Gas Emissions</i> , the Project proposes to incorporate various measures related to building design, landscaping, and energy systems to promote the efficient use of energy. Additionally, the Project proposes to implement sidewalk and bike lane improvements along public roadway rights-of-way in a manner that is consistent with the City of Lake Elsinore General Plan. The Project study area is within the service area of the Riverside Transit Authority (RTA), a public transit agency serving various jurisdictions within Riverside County, although no bus service exists in the immediate Project vicinity under existing conditions. As described in EIR Subsection 4.15, Threshold f., the Project would not conflict with any existing or planned RTA routes.
G7	Actively encourage and create incentives for energy efficiency, where possible.	<u>No inconsistency identified.</u> This policy provides guidance to City staff to establish local incentive programs to encourage and promote energy efficient development. The Project's proposed design features related to building design, landscaping, and energy systems to promote the efficient use of energy are discussed throughout this EIR.
G8	Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	<u>No inconsistency identified.</u> This policy provides guidance to the City to establish a regional land use plan that facilitates the use of transit and non-motorized forms of transportation. The Project proposes to implement sidewalk and bike lane improvements along public roadway rights-of-way in a manner that is consistent with the City of Lake Elsinore General Plan. Based on the foregoing analysis, the Project would not conflict with this RTP/SCS goal.



RTP/SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	<u>No inconsistency identified.</u> This policy provides guidance to the City of Lake Elsinore to monitor the transportation network and to coordinate with other agencies as appropriate.

4.10.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site, including build-out of the City of Lake Elsinore General Plan Land Use Plan.

The entire Project site consists of vacant land under existing conditions. There are no components of the proposed Project with the potential to physically divide any of these existing communities, and the Project would provide pedestrian pathways and public roadways throughout the development that would ensure access to and between surrounding residential neighborhoods would not be affected. As such, the Project has no potential to result in cumulatively-considerable impacts associated with the physical arrangement of an established community.

As discussed in the analysis discussion under Threshold b. above, the Project would be consistent with SCAG's RTP/SCS, and the policies of the City of Lake Elsinore General Plan. Other projects in the vicinity would also be required to be consistent with SCAG's RTP/SCS and the policies of the Lake Elsinore General Plan or the general plans of other jurisdictions. As such, the Project has no potential to result in cumulatively-considerable impacts due to a conflict with applicable land use policies, and impacts would be less than significant.

4.10.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: No Impact. The Project would not physically disrupt or divide any established communities, and no impact would occur.

Threshold b: Less-than-Significant Impact. Although the Project would change the site's existing General Plan land use and zoning classifications, the Project would not result in a significant environmental effect due to an inconsistency with the site's existing or proposed zoning. Furthermore, the Project would be consistent with the General Plan and SCAG RTP/SCS goals. Impacts due to a conflict with the land use designations and policies of the General Plan and other planning documents would be less than significant.

4.10.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Impacts to land use and planning would be less than significant; therefore, mitigation is not required.

4.11 NOISE

This Subsection addresses the environmental issue of noise. The information in this Subsection is based in part on a technical report prepared by Urban Crossroads, Inc., titled, "Nichols Ranch Noise Impact Analysis" (NIA), dated January 2, 2019, and appended to this EIR as *Technical Appendix J*. (Urban Crossroads, 2019)

4.11.1 ACOUSTICAL FUNDAMENTALS

A. Noise Definitions

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Figure 4.11-1, *Typical Noise Levels*, presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below. (Urban Crossroads, 2019, p. 13)

Figure 4.11-1 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	VERY NOISY	SPEECH INTERFERENCE
LOUD AUTO HORN		100		
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	LOUD	SLEEP DISTURBANCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70		
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	NO EFFECT
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30		
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT	NO EFFECT
	BROADCAST/RECORDING STUDIO	10		
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004) March 1974. (Urban Crossroads, 2019, Exhibit 2-A)



B. 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 being 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 noises 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. (Urban Crossroads, 2019, pp. 13-14)

C. Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment. (Urban Crossroads, 2019, p. 14)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The 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., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Lake Elsinore relies on the 24-hour CNEL level to assess land use compatibility with transportation-related noise sources. (Urban Crossroads, 2019, p. 14)

D. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors. (Urban Crossroads, 2019, p. 14)

1. Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (Urban Crossroads, 2019, p. 14)



2. *Ground Absorption*

The propagation path of noise from a highway to a receiver 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 receiver, 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 receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (Urban Crossroads, 2019, pp. 14-15)

3. *Atmospheric Effects*

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (Urban Crossroads, 2019, p. 15)

4. *Shielding*

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. 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. (Urban Crossroads, 2019, p. 15)

E. *Noise Control*

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements. (Urban Crossroads, 2019, p. 15)

F. *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 receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (Urban Crossroads, 2019, p. 15)



G. 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 governments to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (Urban Crossroads, 2019, p. 16)

H. Community Response to Noise

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including: (Urban Crossroads, 2019, p. 16)

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. Despite this variability in behavior on an individual level, the population can be expected to exhibit the responses to changes in noise levels as shown on Figure 4.11-2, *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. (Urban Crossroads, 2019, p. 16)

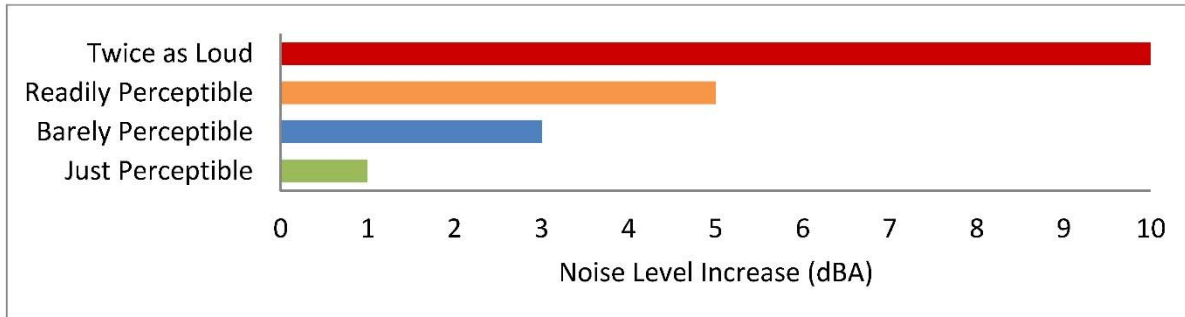
I. Vibration

Per the Federal Transit Administration (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 surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or



transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. (Urban Crossroads, 2019, p. 17)

Figure 4.11-2 Noise Level Increase Perception



(Urban Crossroads, 2019, Exhibit 2-B)

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings, but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal, and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (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. (Urban Crossroads, 2019, p. 17)

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. Exhibit 2-C of the Project's NIA (*Technical Appendix J*) illustrates common vibration sources and the human and structural response to ground-borne vibration. (Urban Crossroads, 2019, p. 17)

4.11.2 EXISTING NOISE CONDITIONS

A. Existing Ambient Noise Environment

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 4.11-3, *Noise Measurement Locations*,



provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Friday, May 12th, 2017. The 24-hour noise level measurements were taken in coordination with the Project Applicant so that no on-site reclamation activities were occurring at the Project site during the noise measurements. (Urban Crossroads, 2019, p. 33)

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 American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (Urban Crossroads, 2019, p. 33)

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. (Urban Crossroads, 2019, p. 33)

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. (Urban Crossroads, 2019, pp. 33-34)

The noise measurements presented below focus on the average or equivalent sound levels (Leq). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 4.11-1, *24-Hour Ambient Noise Level Measurements*, 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. Appendix 5.2 of the Project's NIA (*Technical Appendix J*) provides a summary of the existing hourly ambient noise levels described below. (Urban Crossroads, 2019, p. 34)



Figure 4.11-3



NOT TO SCALE



NOISE MEASUREMENT LOCATIONS



Table 4.11-1 24-Hour Ambient Noise Level Measurements

Location ¹	Distance to Project Boundary (Feet)	Description	Energy Average Noise Level (dBA L _{eq}) ²		Median Noise Level (dBA L ₅₀) ²		CNEL
			Daytime	Nighttime	Daytime	Nighttime	
L1	0'	Located on Nichols Road adjacent to the northern Project site boundary, south of existing Chandler Aggregates activity.	61.4	61.4	50.6	46.2	68.0
L2	0'	Located on Nichols Road at the northern Project site boundary.	58.3	56.5	49.1	45.7	63.4
L3	600'	Located east of the Project site, north of Nichols Road, near existing residential homes.	68.4	65.1	62.7	59.2	72.3
L4	0'	Located at the eastern Project site boundary on Wood Mesa Court near existing residential homes.	56.0	53.9	50.9	49.9	60.9
L5	130'	Located southeast of the Project site on El Toro Road near existing residential homes and Temescal Canyon High School.	64.8	62.3	54.7	53.7	69.8
L6	610'	Located south of the Project site on El Toro Road near existing residential homes and Temescal Canyon High School.	71.9	68.9	61.5	57.8	76.1

¹ See Figure 4.11-3 for the noise level measurement locations.

² The long-term 24-hour measurement printouts are included in Appendix 5.2 of the Project's NIA (*Technical Appendix J*).

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

(Urban Crossroads, 2019, Table 5-1)

- Location L1 represents the noise levels on Nichols Road adjacent to the northern Project site boundary, south of the existing mining operation located north of Nichols Road. The noise level measurements collected show an overall 24-hour exterior noise level of 68.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.4 dBA Leq with an average nighttime noise level of 61.4 dBA Leq. (Urban Crossroads, 2019, p. 34)
- Location L2 represents the noise levels on Nichols Road at the northern Project site boundary. The noise level measurements collected show an overall 24-hour exterior noise level of 63.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 58.3 dBA Leq with an average nighttime noise level of 56.5 dBA Leq. (Urban Crossroads, 2019, p. 34)
- Location L3 represents the noise levels east of the Project site, north of Nichols Road, near existing residential homes. The 24-hour CNEL indicates that the overall exterior noise level is 72.3 dBA



CNEL. The energy (logarithmic) average daytime noise level was calculated at 68.4 dBA Leq with an average nighttime noise level of 65.1 dBA Leq. (Urban Crossroads, 2019, p. 34)

- Location L4 represents the noise levels at the eastern Project site boundary on Wood Mesa Court near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 60.9 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 56.0 dBA Leq with an average nighttime noise level of 53.9 dBA Leq. (Urban Crossroads, 2019, p. 34)
- Location L5 represents the noise levels southeast of the Project site on El Toro Road near existing residential homes and Temescal Canyon High School. The noise level measurements collected show an overall 24-hour exterior noise level of 69.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 64.8 dBA Leq with an average nighttime noise level of 62.3 dBA Leq. (Urban Crossroads, 2019, p. 34)
- Location L6 represents the noise levels south of the Project site on El Toro Road near existing residential homes and Temescal Canyon High School. The 24-hour CNEL indicates that the overall exterior noise level is 76.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 71.9 dBA Leq with an average nighttime noise level of 68.9 dBA Leq. (Urban Crossroads, 2019, p. 34)

Table 4.11-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 of the Project's NIA (*Technical Appendix J*) provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L1, L2, L5, L8, L25, L50, L90, L95, and L99 percentile noise levels observed during the daytime and nighttime periods. (Urban Crossroads, 2019, p. 35)

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. This includes the auto and heavy truck activities on I-15 near the noise level measurement locations. Additional background noise sources include activities at the existing mining operation north of the Project site. The 24-hour existing noise level measurements shown on Table 4.11-1 present the existing ambient noise conditions. (Urban Crossroads, 2019, p. 35)

B. Existing Ground-borne Vibration

Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to 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. Under existing conditions, mining equipment associated with on-going reclamation activities produces ground-borne vibration; however, these sources of ground-borne vibration are expected to cease upon completion of reclamation activities and prior to buildout of the proposed Project.



C. Airport-Related Noise

The Project site is located approximately 12 miles southwest of the March Air Reserve Base, which is the nearest public airport facility within the Project site's vicinity. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project site. The Project site does not occur within the Airport Influence Area (AIA) for either of these airports, which indicates that the Project site is not subject to substantial airport-related noise under existing conditions.

4.11.3 APPLICABLE ENVIRONMENTAL REGULATIONS

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. Local noise standards and guidelines are often based on the broader guidelines established by state and federal agencies. The following is a brief description of the federal, state, and local environmental laws and related regulations related to noise. (Urban Crossroads, 2019, p. 19)

A. Federal Regulations

1. Noise Control Act of 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for effective coordination of Federal research and activities in noise control; (2) authorize the establishment of Federal noise emission standards for products distributed in commerce; and (3) provide information to the public respecting the noise emission and noise reduction characteristics of such products. (EPA, 2017h)

While primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. The Environmental Protection Agency (EPA) is directed by Congress to coordinate the programs of all Federal agencies relating to noise research and noise control. (EPA, 2017h)

2. Federal Transit Administration

The Federal Transit Administration (FTA) has published a Noise and Vibration Impact Assessment (NVIA), which provides guidance for preparing and reviewing the noise and vibration sections of environmental documents. In the interest of promoting quality and uniformity in assessments, the manual is used by project sponsors and consultants in performing noise and vibration analyses for inclusion in environmental documents. The manual sets forth the methods and procedures for determining the level of noise and vibration impact resulting from most federally-funded transit projects and for determining what can be done to mitigate such impact. (FTA, 2006, p. 1-1)

The NVIA also establishes criteria for acceptable ground-borne vibration, which are expressed in terms of root mean square (rms) velocity levels in decibels and the criteria for acceptable ground-borne noise are expressed in terms of A-weighted sound levels. As shown in Table 4.11-2, *Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for General Assessment*, the FTA identifies three categories of land uses and provides

Ground-Based Vibration (GBV) and Ground-Based Noise (GBN) criteria for each category of land use. (FTA, 2006, pp. 8-3 and 8-4)

Table 4.11-2 Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch /sec)			GBN Impact Levels (dB re 20 micro Pascals)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴	N/A ⁴	N/A ⁴	N/A ⁴
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA
Notes: <ol style="list-style-type: none"> 1. "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category. 2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations. 3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines. 4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors. 5. Vibration-sensitive equipment is generally not sensitive to ground-borne noise. 						

(FTA, 2006, Table 8-1)

3. Federal Aviation Administration

The Federal Aviation Administration (FAA) regulates the maximum noise level that an individual civil aircraft can emit through requiring aircraft to meet certain noise certification standards. These standards designate changes in maximum noise level requirements by "stage" designation. The standard requires that the aircraft meet or fall below designated noise levels. For civil jet aircraft, there are four stages identified, with Stage 1 being the loudest and Stage 4 being the quietest. For helicopters, two different stages exist, Stage 1 and Stage 2. As with civil jet aircraft, Stage 2 is quieter than Stage 1. In addition, the FAA is currently working to adopt the latest international standards for helicopters, which will be called Stage 3 and will be quieter than Stage 2.

The FAA has undertaken a phase out of older, noisier civil aircraft, resulting in some stages of aircraft no longer being in the fleet. Currently within the contiguous US, civil jet aircraft over 75,000 pounds maximum take-off weight must meet Stage 3 and Stage 4 to fly. In addition, aircraft at or under 75,000 pounds maximum



take-off weight must meet Stage 2, 3, or 4 to operate within the U.S. In addition, by December 31, 2015, all civil jet aircraft, regardless of weight must meet Stage 3 or Stage 4 to fly within the contiguous U.S. Both Stage 1 and Stage 2 helicopters are allowed to fly within the U.S. (FAA, 2018)

The U.S. noise standards are defined in the Code of Federal Regulations (CFR) Title 14 Part 36 – *Noise Standards: Aircraft Type and Airworthiness Certification* (14 CFR Part 36). The FAA publishes certificated noise levels in the advisory circular, *Noise Levels for U.S. Certificated and Foreign Aircraft*. This advisory circular provides noise level data for aircraft certificated under 14 CFR Part 36 and categorizes aircraft into their appropriate "stages." Any aircraft that is certified for airworthiness in the U.S. needs to also comply with noise standard requirements to receive a noise certification. The purpose of the noise certification process is to ensure that the latest available safe and airworthy noise reduction technology is incorporated into aircraft design and enables the noise reductions offered by those technologies to be reflected in reductions of noise experienced by communities. As noise reduction technology matures, the FAA works with the international community to determine if a new stringent noise standard is needed. If so, the international community through the International Civil Aviation Organization (ICAO) embarks on a comprehensive analysis to determine what that new standard will be. (FAA, 2016)

The current FAA noise standards applicable to new type certifications of jet and large turboprop aircraft is Stage 4. It is equivalent to the ICAO Annex 16, Volume 1 Chapter 4 standards. Recently, the international community has established and approved a more stringent standard within the ICAO Annex 16, Volume 1 Chapter 14, which became effective July 14, 2014. The FAA is adopting this standard and promulgating the rule for Stage 5 that is anticipated to be effective for new type certificates after December 31, 2017 and December 31, 2020, depending on the weight of the aircraft. The Notice of Proposed Rule Making (NPRM) for Stage 5 was published on January 14, 2016. (FAA, 2016)

For helicopters, the FAA has noise standards for a Stage 3 helicopter that became effective on May 5, 2014. These more stringent standards apply to new type helicopters and are consistent with ICAO Annex 16, Volume 1 Chapter 8 and Chapter 11. (FAA, 2016)

The FAA Modernization and Reform Act of 2012, in Section 513, had a prohibition on operating certain aircraft weighing 75,000 pounds or less not complying with Stage 3 noise levels, and on July 2, 2013, the FAA published a Final Rule in the Federal Register for the *Adoption of Statutory Prohibition the Operation of Jets Weighing 75,000 Pounds or Less That Are Not Stage 3 Noise Compliant*. In 1990, Congress passed the Aviation Noise and Capacity Act, which required that by the year 2000 all jet and large turboprop aircraft at civilian airports be Stage 3. (FAA, 2016)

4. Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency responsible for administering the Federal-aid highway program in accordance with Federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, applies to highway construction projects where a State department of transportation has requested Federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in



areas adjacent to federally-aided highways for proposed construction of a highway on a new location or the reconstruction of an existing highway to either significantly change the horizontal or vertical alignment or increase the number of through-traffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the project design. (FHWA, 2017)

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations Part 772. The regulations require the following during the planning and design of a highway project:

- Identification of traffic noise impacts;
- Examination of potential mitigation measures;
- The incorporation of reasonable and feasible noise mitigation measures into the highway project; and
- Coordination with local officials to provide helpful information on compatible land use planning and control. (FHWA, 2017)

The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached or exceeded. Compliance with the noise regulations is a prerequisite for the granting of Federal-aid highway funds for construction or reconstruction of a highway. (FHWA, 2017)

5. *Construction-Related Hearing Conservation*

The Occupational Safety and Health Administration (OSHA) hearing conservation program is designed to protect workers with significant occupational noise exposures from hearing impairment even if they are subject to such noise exposures over their entire working lifetimes. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (OSHA, 2002) This analysis does not evaluate the noise exposure of construction workers within the Project site based on CEQA requirements, and instead, evaluates the Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment.

B. State Regulations

1. State of California Noise Requirements

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels.



2. Building Standards Code

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Standards Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3. California Noise Insulation Standards

The California Noise Insulation Standards (CCR Title 25 Section 1092) establish uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 25 specifies that interior noise levels attributable to exterior sources shall not exceed 45 dBA Ldn/CNEL (i.e., the same levels that the EPA recommends for residential interiors) in any habitable room of a new dwelling. An acoustical study must be prepared for proposed multiple unit residential and hotel/motel structures where outdoor Ldn/CNEL is 60 dBA or greater. The study must demonstrate that the design of the building would reduce interior noise to 45 dBA Ldn/CNEL or lower. Because noise levels can increase over time in developing areas, Title 25 also specifies that dwellings are to be designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application.

4. OPR General Plan Guidelines

Though not adopted by law, the 2017 California General Plan Guidelines, published by the California Governor's Office of Planning and Research (OPR), provides guidance for local agencies in preparing or updating General Plans. The Guidelines provide direction on the required Noise Element portion of the General Plans. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that "minimizes the exposure of community residents to excessive noise." Noise level contours must be mapped and the conclusions of the element used as a basis for land use decisions. The element must include implementation measures and possible solutions to existing and foreseeable noise problems. Furthermore, the policies and standards must be sufficient to serve as a guideline for compliance with sound transmission control requirements. The noise element directly correlates to the Land Use, Circulation, and Housing Elements. The Noise Element must be used to guide decisions concerning land use and the location of new roads and transit facilities since these are common sources of excessive noise levels. The noise levels from existing land uses, including mining, agricultural, and industrial activities, must be closely analyzed to ensure compatibility, especially where residential and other sensitive receptors have encroached into areas previously occupied by these uses. (OPR, 2017, pp. 131-132)



C. Local Regulations

1. **City of Lake Elsinore General Plan**

The City of Lake Elsinore has adopted Section 3.7, Noise, of the Public Safety and Welfare Element of the General Plan to control and abate environmental noise, and to protect the citizens of Lake Elsinore from excessive exposure to noise. The Noise section specifies the maximum exterior noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise section identifies noise policies designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receivers, or degrade quality of life. To protect City of Lake Elsinore residents from excessive noise, the Noise section contains the following goal related to the Project: (Urban Crossroads, 2019, p. 20)

Goal 7 Maintain an environment for all City residents and visitors free of unhealthy, obtrusive, or otherwise excessive noise.

To ensure noise-sensitive land uses are protected from excessive noise levels (Goal 7), the Noise section identifies the following policies: (Urban Crossroads, 2019, p. 20)

- 7.1 *Apply the noise standards set forth in the Lake Elsinore Noise and Land Use Compatibility Matrix (see Table 4.11-3, Operational Exterior Noise Level Standards) and Interior and Exterior Noise Standards (see Table 4.11-4, Mobile Equipment Noise Level Limits) when considering all new development and redevelopment proposed within the City.*
- 7.2 *Require that mixed-use structures and areas be designed to prevent transfer of noise and vibration from commercial areas to residential areas.*
- 7.3 *Strive to reduce the effect of transportation noise on the I-15.*
- 7.4 *Consider estimated roadway noise contours based upon Figure 3.6, Noise Contours, when making land use design decisions along busy roadways throughout the City.*
- 7.5 *Participate and cooperate with other agencies and jurisdictions in the development of noise abatement plans for highways.*

Land Use Compatibility

The *Noise and Land Use Compatibility Matrix* (Table 4.11-3) in the City of Lake Elsinore General Plan Noise section provides guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Figure 4.11-4, *Noise and Land Use Compatibility Matrix*, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. (Urban Crossroads, 2019, p. 20)

The *Noise and Land Use Compatibility Matrix* describes categories of compatibility and not specific noise standards. According to these categories of compatibility, the Project's proposed residential land uses are considered clearly compatible with exterior noise levels below 60 dBA CNEL and normally compatible with exterior noise levels below 70 dBA CNEL. Commercial land use is considered clearly compatible with exterior noise levels below 70 dBA CNEL and normally compatible with noise levels below 80 dBA CNEL. For



normally compatible land use, new construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and 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. (Urban Crossroads, 2019, p. 21)

Table 4.11-3 Operational Exterior Noise Level Standards

Land Use	Condition	Based Exterior Noise Level Standards (dBA) ²				
		L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)
Single-Family Residential	Daytime	50	55	60	65	70
	Nighttime	40	45	50	55	60
Multi-Family Residential	Daytime	50	55	60	65	70
	Nighttime	45	50	55	60	65
Public Space/ Light Comm.	Daytime	60	65	70	75	80
	Nighttime	55	60	65	70	75
General Commercial	Daytime	65	70	75	80	85
	Nighttime	60	65	70	75	80
Light Industrial	Anytime	70	75	80	85	90
Heavy Industrial	Anytime	75	80	85	90	95

1. Source: City of Lake Elsinore Municipal Code, Section 17.176.060(A)(2) & Table 1.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

(Urban Crossroads, 2019, Table 3-1)

Table 4.11-4 Mobile Equipment Noise Level Limits

Type	Receiving Land Use Category	Time Period	Maximum Noise Levels (dBA L _{max}) ¹
I	Single-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	75
		Nighttime (7:00 p.m. - 7:00 a.m.)	60
II	Multi-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	80
		Nighttime (7:00 p.m. - 7:00 a.m.)	65
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 7:00 p.m.)	85
		Nighttime (7:00 p.m. - 7:00 a.m.)	70

1. Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment, City of Lake Elsinore Municipal Code 17.176.080 (F).

(Urban Crossroads, 2019, Table 3-2)



Figure 4.11-4 Noise and Land Use Compatibility Matrix

Land Use Categories		Day-Night Noise Level (LDN)						
Categories	Uses	≤55	60	65	70	75	80	≥
Residential	Single, Family, Duplex, Multiple Family	A	A	B	B	C	D	D
Residential	Mobile Homes	A	A	B	C	C	D	D
Commercial Regional District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
Commercial Regional Village, District Special	Commercial, Retail, Bank, Restaurant, Movie Theatre	A	A	A	A	B	B	C
Commercial Industrial Institutional	Office Building, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C	D
Commercial Regional Institutional Civic Center	Amphitheatre, Concert Hall Auditorium, Meeting Hall	B	B	C	C	D	D	D
Commercial Recreation	Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	B	B	D	D
Commercial General, Special Industrial Institutional	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Institutional General	Hospital, Church, Library, Schools, Classroom	A	A	B	C	C	D	D
Open Space	Parks	A	A	A	B	C	D	D
Open Space	Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
Agriculture	Agriculture	A	A	A	A	A	A	A
Interpretation								
Zone A Clearly Compatible	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.							
Zone B Normally Compatible	New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.							
Zone C Normally Incompatible	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.							
Zone D Clearly Incompatible	New construction or development should generally not be undertaken.							

Source: City of Lake Elsinore General Plan, Public Safety and Welfare Element, Table 3-1.
(Urban Crossroads, 2019, Exhibit 3-A)



Transportation Noise Standards

The City of Lake Elsinore General Plan Noise section specifies the noise levels allowable for new developments. The interior and exterior noise standards shown previously Table 4.11-4 identify an exterior noise level of 60 dBA CNEL for noise-sensitive residential land uses, and no exterior noise level standards for commercial and hotel land uses. In addition, the City requires that certain commercial and institutional land uses achieve an indoor noise standard of 45 dBA CNEL with windows closed consistent with the California Building Code requirements. The City of Lake Elsinore General Plan Noise section standards are shown on Table 4.11-5, *Interior and Exterior Noise Standards*. These standards typically apply to transportation-related (mobile) noise sources, while the City's Municipal Code, as discussed below, identifies the noise level limits for stationary sources of noise. (Urban Crossroads, 2019, p. 21)

Table 4.11-5 Interior and Exterior Noise Standards

Land Use Categories		Energy Average LDN	
Categories	Uses	Interior	Exterior
Residential	Single Family, Duplex, Multiple Family	45 ^{3,5}	60
	Mobile Homes	–	60 ⁴
Commercial, Institutional	Hotel, Motel, Transient Lodging	45 ⁵	–
	Hospital, School's classroom	45	–
	Church, Library	45	–

Interpretation

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors.
2. Outdoor environment limited to: Private yard of single family, multi-family private patio or balcony which is served by a means of exit from inside, Mobile Home Park.
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
5. As per California Administrative Code, Title 24, Part 6, Division T25, Chapter 1, Subchapter 1, Article 4, Section T25-28.

Source: City of Lake Elsinore General Plan, Public Safety and Welfare Element, Table 3-2.
(Urban Crossroads, 2019, Exhibit 3-B)

2. City of Lake Elsinore Municipal Code

Operational Noise Standards

Section 17.176.060 of the City of Lake Elsinore Municipal Code states the following: *No person shall, operate or cause to be operated, any source of sound at any location within the incorporated City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured on any other property, either incorporated or unincorporated to exceed...the maximum permissible sound levels by receiving land use.* For noise-sensitive residential properties, the



Municipal Code identifies base exterior noise level limits for the daytime (7:00 a.m. to 10:00 p.m.) hours of 50 dBA L₅₀ and 40 dBA L₅₀ during the nighttime (10:00 p.m. to 7:00 a.m.) hours. These standards shall apply for a cumulative period of 30 minutes in any hour (L₅₀), as well as the standard plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes in any hour (L₂₅), or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour (L₈), or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour (L₂), or the standard plus 20 dBA for any period of time (L_{max}). Table 4.11-3 shows the City of Lake Elsinore noise standards by land use. (Urban Crossroads, 2019, pp. 23-24)

Construction Noise Standards

The City of Lake Elsinore has set restrictions to control noise impacts associated with construction activities. Section 17.176.080(F), *Construction/Demolition*, indicates that operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work by public service utilities or by variance issued by the City is prohibited. The Municipal code further requires construction activities to be conducted in such a manner that the maximum (L_{max}) noise levels at affected residential and commercial properties will not exceed the mobile (less than 10-day duration) and stationary equipment (greater than 10-day duration) noise standards provided on Table 4.11-4 (previously presented) and Table 4.11-6, *Stationary Equipment Noise Level Limits*, respectively. (Urban Crossroads, 2019, p. 24)

Table 4.11-6 Stationary Equipment Noise Level Limits

Type	Receiving Land Use Category	Time Period	Maximum Noise Levels (dBA L _{max}) ¹
I	Single-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	60
		Nighttime (7:00 p.m. - 7:00 a.m.)	50
II	Multi-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	65
		Nighttime (7:00 p.m. - 7:00 a.m.)	55
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 7:00 p.m.)	70
		Nighttime (7:00 p.m. - 7:00 a.m.)	60

1. Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment, City of Lake Elsinore Municipal Code 17.176.080(F). (Urban Crossroads, 2019, Table 3-3)

In addition to the construction noise level standards identified on Table 4.11-4 and Table 4.11-6, the City of Lake Elsinore Municipal Code establishes standards for the noise levels received at business properties. Both the mobile equipment noise level limit of 85 dBA L_{max} and stationary equipment noise level limit of 75 dBA L_{max} shall apply at nearby business properties during all hours on a daily basis, including Sundays and legal holidays. (Urban Crossroads, 2019, p. 25)



Construction Vibration Standards

The City of Lake Elsinore Municipal Code, Section 17.176.080(G), states that operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on public space or public right-of-way is prohibited. The Municipal Code defines the vibration perception threshold to be a motion velocity of 0.01 in/sec over the range of one to 100 Hz, as shown on Table 4.11-7, *Construction Vibration Standards*. (Urban Crossroads, 2019, p. 26)

Table 4.11-7 Construction Vibration Standards

Jurisdiction	Root-Mean-Square (RMS) Velocity (in/sec)
City of Lake Elsinore ¹	0.01

1. Source: City of Lake Elsinore Municipal Code, Section 17.176.080(G).
(Urban Crossroads, 2019, Table 3-4)

4.11.4 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to noise if the Project or any Project-related component would result in any of the following:

- a. *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
- b. *Generation of excessive ground borne vibration or ground borne noise levels;*
- c. *For a project located within the vicinity of a private air strip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or*

The above-listed thresholds are derived directly from Section XIII of Appendix G to the CEQA Guidelines and address typical adverse effects to noise (OPR, 2018).

While the CEQA Guidelines and the City of Lake Elsinore General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type, they do not define the levels at which increases are considered substantial or excessive for use under Thresholds a. and b.. The significance criteria for evaluating these thresholds is discussed below. (Urban Crossroads, 2019, p. 27).

Threshold c. evaluates whether the Project would subject future Project residents or employees to substantial noise levels associated with public or private airports. The Riverside County Airport Land Use Compatibility Plan (ALUCP) indicates that residential development would be “clearly acceptable” with aircraft-related noise levels up to 55 dBA CNEL, and marginally acceptable up to 60 dBA CNEL. Commercial office uses are identified by the ALUCP as “clearly acceptable” with aircraft noise levels up to 55 dBA CNEL, and “marginally acceptable” with aircraft-related noise levels up to 60 dBA CNEL. Commercial retail uses are



considered “clearly acceptable” with aircraft-related noise levels up to 65 dBA CNEL, and “marginally acceptable” with aircraft-related noise levels up to 75 dBA CNEL. (ALUC, 2004, Table 2B)

A. Noise Sensitive Receivers

Noise-level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person’s subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted – the so-called ambient environment. (Urban Crossroads, 2019, pp. 27-28)

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL). (Urban Crossroads, 2019, p. 28)

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON considers a readily perceptible 5 dBA or greater project-related noise level increase to comprise 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 4.11-8, *Significance of Noise Impacts at Noise-Sensitive Receivers*, provides a summary of the potential noise impact significance criteria, based on guidance from FICON. (Urban Crossroads, 2019, p. 28)

Table 4.11-8 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

Federal Interagency Committee on Noise (FICON), 1992.

(Urban Crossroads, 2019, Table 4-1)



B. Non-Noise-Sensitive Receivers

The City of Lake Elsinore General Plan *Noise and Land Use Compatibility Matrix*, previously presented in Table 4.11-3, is used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Figure 4.11-4, the normally compatible exterior noise levels for non-noise-sensitive land uses (e.g., commercial, industrial) is 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered normally incompatible. (Urban Crossroads, 2019, p. 29)

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 instead rely on the City of Lake Elsinore General Plan off-site 70 dBA CNEL exterior noise level criteria. (Urban Crossroads, 2019, p. 29)

C. Significance Criteria Summary

Table 4.11-9, *Significance Criteria Summary*, provides a summary of the significance criteria utilized herein to evaluate the Project's potential impacts due to noise. As shown in Table 4.11-9, noise impacts would be considered significant if any of the following occur as a result of the proposed Project. (Urban Crossroads, 2019, pp. 29-30)

Off-Site Traffic Noise

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, school, etc.):
 - are less than 60 dBA and the Project creates a readily perceptible 5 dBA or greater Project-related noise level increase; or
 - range from 60 to 65 dBA and the Project creates a barely perceptible 3 dBA or greater Project-related noise level increase; or
 - already exceed 65 dBA, and the Project creates a community noise level impact of greater than 1.5 dBA (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g., commercial, industrial):
 - are less than the 70 dBA CNEL criteria and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - are greater than the 70 dBA CNEL criteria and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase.

Table 4.11-9 Significance Criteria Summary

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site	Noise-Sensitive ¹	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-Noise-Sensitive ²	If ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
On-Site ²	Residential	Exterior Noise Level Standard	60 dBA CNEL	
		Interior Noise Level Standard	45 dBA CNEL	
	Hotel	Interior Noise Level Standard	45 dBA CNEL	
Operational	Varied ³	≥ 30 Minutes L ₅₀	See Table 4.11-3 for the Exterior Noise Level Standards by Land Use	
		≥ 15 Minutes L ₂₅		
		≥ 5 Minutes L ₈		
		≥ 1 Minute L ₂		
		Anytime L _{max}		
	Noise-Sensitive ¹	if ambient is < 60 dBA	≥ 5 dBA Project increase	
		if ambient is 60 - 65 dBA	≥ 3 dBA Project increase	
		if ambient is > 65 dBA	≥ 1.5 dBA Project increase	
Construction	Noise-Sensitive	Permitted hours of 7:00 a.m. to 7:00 p.m. weekdays; with no activity allowed on weekends or holidays. ⁴		
		Noise Level Threshold (<10 Days) ⁴	See Table 4.11-4	
		Noise Level Threshold (>10 Days) ⁴	See Table 4.11-6	
		Vibration Level Threshold ⁵	0.01 in/sec RMS	n/a

1 Source: FICON, 1992.

2 Source: City of Lake Elsinore General Plan, Public Health and Safety Element, Section 3.7 Noise, Tables 3-1 & 3-2.

3 Source: City of Lake Elsinore Municipal Code, Chapter 17.176 Noise Control.

4 Source: City of Lake Elsinore Municipal Code, Section 17.176.080(F).

5 Source: City of Lake Elsinore Municipal Code, Section 17.176.080(G).

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted, so no nighttime construction noise level limits are identified.

(Urban Crossroads, 2019, Table 4-2)

On-Site Traffic Noise

- If the on-site traffic noise levels exceed:
 - the exterior 60 dBA CNEL noise level standard for single-family residential outdoor areas of frequent human use (e.g., backyards); or
 - the interior 45 dBA CNEL noise level standard for residential and hotel uses (City of Lake Elsinore General Plan, Public Health and Safety Element, Section 3.7 Noise, Table 3-2).



Operational Noise

- If Project-related operational (stationary-source) noise levels exceed the exterior noise level standard at nearby sensitive receiver locations identified on Table 4.11-3 by land use category (City of Lake Elsinore Municipal Code, Chapter 17.176 Noise Control).
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
 - are less than 60 dBA L₅₀ and the Project creates a readily perceptible 5 dBA L₅₀ or greater Project-related noise level increase; or
 - range from 60 to 65 dBA L₅₀ and the Project creates a barely perceptible 3 dBA L₅₀ or greater Project-related noise level increase; or
 - already exceed 65 dBA L₅₀, and the Project creates a community noise level impact of greater than 1.5 dBA L₅₀ (FICON, 1992).

Construction Noise and Vibration

- If Project-related construction activities generate noise levels which exceed the mobile or stationary equipment noise level limits described on Table 4.11-4 and Table 4.11-6 (City of Lake Elsinore Municipal Code, Section 17.176.080(F)).
- If short-term Project generated construction vibration levels exceed the City of Lake Elsinore maximum acceptable vibration standard of 0.01 in/sec (RMS) at sensitive receiver locations (City of Lake Elsinore Municipal Code, Section 17.176.080(G)).

4.11.5 METHODOLOGY FOR CALCULATING PROJECT-RELATED NOISE IMPACTS

A. Sensitive Receptors

Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals. (Urban Crossroads, 2019, p. 79)

Sensitive receivers near the Project site include existing residential homes and Temescal Canyon High School, as described below and depicted on Figure 4.11-5, *Receiver Locations*. Other sensitive land uses in the Project study area that are located at greater distances than those identified in the Project's NIA would experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. (Urban Crossroads, 2019, p. 79)



- R1: Located approximately 191 feet east of the Project site, R1 represents an existing residential home south of Nichols Road. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R2: Location R2 represents existing residential homes located approximately 56 feet east of the Project site on Wood Mesa Court. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing residential home located southeast across El Toro Road at roughly 85 feet. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R4: Location R4 represents the closest existing Temescal Canyon High School building to the Project site located roughly 76 feet south. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing baseball field south of the Project site within Temescal Canyon High School at roughly 122 feet. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R6: Location R6 represents an existing baseball field south of the Project site within Temescal Canyon High School at roughly 60 feet. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.

B. Federal Highway Administration Traffic Noise Prediction Model

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major, or arterial); the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total average daily traffic (ADT); the travel speed; the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume; the roadway grade; the angle of view (e.g., whether the roadway view is blocked); the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping); and the percentage of total ADT which flows each hour throughout a 24-hour period. (Urban Crossroads, 2019, p. 37)

1. Off-Site Traffic Noise Prediction Model Inputs

Table 6-1 of the Project's NIA (*Technical Appendix J*) presents the roadway parameters used to assess the Project's off-site transportation noise impacts. NIA Table 6-1 identifies the 21 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the



Figure 4.11-5



NOT TO SCALE



RECEIVER LOCATIONS



City of Lake Elsinore General Plan Community Form Element, and the posted vehicle speeds. 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. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this noise study. (Urban Crossroads, 2019, p. 37)

The average daily traffic volumes used in the NIA are presented on Tables 6-2 to 6-4 of the Project's NIA (*Technical Appendix J*), and are provided by the Project's Traffic Impact Analysis ("TIA," EIR *Technical Appendix L*) for each of the scenarios listed in Subsection 6.1.1 of the NIA (Urban Crossroads, 2019, pp. 37-38):

Table 6-5 of the Project's NIA (*Technical Appendix J*) presents the time of day vehicle splits and Table 6-6 of the NIA presents the traffic flow distributions (vehicle mix) used for the analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model. (Urban Crossroads, 2019, p. 41)

2. On-Site Traffic Noise Prediction Model Inputs

The on-site roadway parameters including the average daily traffic (ADT) volumes used for the analysis are presented on Table 6-1 of the Project's NIA (*Technical Appendix J*). Based on the City of Lake Elsinore General Plan Community Form Element, Nichols Road is classified as a 6-lane Urban Arterial. To predict the future on-site noise environment at the Project site, average daily volumes were obtained from the County of Riverside Office of Industrial Hygiene requirements for noise studies. Future traffic volumes for I-15 were based on an assumed 10-percent growth over 2016 conditions found in the Caltrans Traffic Data Branch Annual Average Daily Truck Traffic on the California Highways System. The traffic volumes shown on Table 6-1 of the NIA reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures, if any, that address the worst-case future conditions. Soft site conditions were used to analyze the traffic noise impacts within the Project study area which account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in the Project's NIA. (Urban Crossroads, 2019, p. 42)

Table 6-5 of the Project's NIA (*Technical Appendix J*) presents the time of day vehicle splits by vehicle type, and NIA Table 6-6 presents the total traffic flow distributions (vehicle mixes) used for the analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA Model based on roadway types. To predict the future noise environment at each building 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 each Project building in relationship to I-15 and Nichols Road, as shown on Exhibit 1-B of the Project's NIA. (Urban Crossroads, 2019, p. 43)



C. Construction Noise Methodology

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 are expected to occur in the following stages: (Urban Crossroads, 2019, p. 93)

- Site Preparation
- Mass & Fine Grading
- Building Construction
- Paving
- Architectural Coating

The construction noise analysis provided in the Project's NIA (*Technical Appendix J*) was prepared using reference noise level measurements taken by Urban Crossroads, Inc. 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 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). 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. The construction stages used in this analysis are consistent with the data used to support the construction emissions in the Project's Air Quality Impact Analysis ("AQIA," EIR *Technical Appendix B*). (Urban Crossroads, 2019, p. 93)

To describe the Project construction noise levels, measurements were collected by Urban Crossroads for similar activities at several construction sites. Table 4.11-10, *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 4.11-10 have been adjusted to describe a common reference distance of 50 feet. (Urban Crossroads, 2019, p. 93)

D. Construction Vibration Assessment Methodology

The construction vibration 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. (Urban Crossroads, 2019, p. 43)



Table 4.11-10 Construction Reference Noise Levels

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L _{max})	Reference Noise Levels @ 50 Feet (dBA L _{max}) ⁶
1	Truck Pass-Bys & Dozer Activity ¹	30'	68.1	63.7
2	Dozer Activity ¹	30'	76.4	72.0
3	Construction Vehicle Maintenance Activities ²	30'	74.8	70.4
4	Foundation Trenching ²	30'	74.9	70.5
5	Rough Grading Activities ²	30'	84.8	80.4
6	Framing ³	30'	76.7	72.3
7	Two Scrapers Pass-By ⁴	30'	86.9	82.5
8	Concrete Mixer Truck Movements ⁵	50'	73.1	73.1
9	Concrete Paver Activities ⁵	30'	75.7	71.3
10	Concrete Mixer Pour & Paving Activities ⁵	30'	76.3	71.9
11	Concrete Mixer Backup Alarms & Air Brakes ⁵	50'	78.8	78.8
12	Concrete Mixer Pour Activities ⁵	50'	79.2	79.2

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).

(Urban Crossroads, 2019, Table 11-1)

While vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 4.11-11, *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: $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$. (Urban Crossroads, 2019, p. 43)



Table 4.11-11 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

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.
(Urban Crossroads, 2019, Table 6-8)

4.11.6 **IMPACT ANALYSIS**

Threshold a.: Would the Project result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Implementation of the proposed Project has the potential to result in significant noise level impacts associated with Project construction and long-term operation that could exceed the City's noise standards. Each is discussed below.

A. Construction Noise Analysis

Tables 11-2 to 11-6 of the Project's NIA (*Technical Appendix J*) show the Project construction stages and the reference construction noise levels used for each stage. Table 4.11-12, *Unmitigated Construction Equipment Noise Level Summary*, provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. Based on the reference construction noise levels, the Project-related construction noise levels when the highest reference noise level is operating at a single point nearest the sensitive receiver location would range from 59.8 to 80.1 dBA Lmax, as shown on Table 4.11-12.

Table 4.11-12 Unmitigated Construction Equipment Noise Level Summary

Receiver Location ¹	Construction Stage Hourly Noise Level (dBA Lmax)					
	Site Preparation	Mass & Fine Grading	Building Construction	Paving	Architectural Coating	Peak Activity ²
R1	59.8	70.3	60.1	67.0	60.1	70.3
R2	69.6	80.1	69.9	76.8	69.9	80.1
R3	69.0	79.5	69.3	76.3	69.3	79.5
R4	67.2	77.7	67.5	74.4	67.5	77.7
R5	63.5	74.0	63.8	70.8	63.8	74.0
R6	69.0	79.5	69.3	76.3	69.3	79.5

1. Noise receiver locations are shown on Figure 4.11-6, *Construction Activity and Receiver Locations*.

2. Estimated construction noise levels during peak operating conditions.

(Urban Crossroads, 2019, Table 11-7)



The construction noise analysis shows that the highest construction noise levels would occur when construction activities take place at the closest point from primary Project construction activity to each of the nearby receiver locations. As shown on Table 4.11-12, the unmitigated construction noise levels are expected to range from 59.8 to 80.1 dBA Lmax at the receiver locations. To evaluate whether the Project would generate potentially significant short-term noise levels at offsite sensitive receiver locations the City of Lake Elsinore stationary construction equipment noise level standard of 60 dBA Lmax is used as the acceptable construction noise threshold at the nearby sensitive receiver locations since Project construction would occur for greater than 10 consecutive days. (Urban Crossroads, 2019, p. 100)

Table 4.11-13, *Unmitigated Construction Equipment Noise Level Compliance*, shows the highest construction noise levels at the potentially impacted receiver locations are expected to approach 80.1 dBA Lmax and would exceed the City of Lake Elsinore stationary construction equipment noise level standards for residential and semi-residential (school) uses during temporary Project construction activities at receiver locations R1 to R6 (refer to Figure 4.11-6, *Construction Activity and Receiver Locations*). Project-related noise impacts due to unmitigated Project construction noise levels affecting nearby sensitive receptors therefore represent a potentially significant impact prior to mitigation at receiver locations R1 to R6. (Urban Crossroads, 2019, p. 101)

B. Operational Noise Analysis

Long-term operation of the proposed Project has the potential to cause or contribute to significant traffic-related impacts affecting nearby sensitive receptors. Future residential and commercial structures on site also may be exposed to interior and/or exterior noise levels that exceed the City's noise standards. Additionally, operation of the proposed Project, and in particular the proposed commercial retail uses, has the potential to expose nearby sensitive receptors to noise levels that exceed the City's noise standards and/or result in a substantial increase in noise levels affecting sensitive receptors as compared to ambient noise levels. Each is discussed below.

1. Off-Site Transportation Noise Impacts

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the Project's TIA (*Technical Appendix L*). Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for each of the traffic study scenarios listed above in subsection 4.11.5.B.1. (Urban Crossroads, 2019, p. 45)

□ 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,



Table 4.11-13 Unmitigated Construction Equipment Noise Level Compliance

Receiver Location ¹	Land Use Category	Peak Construction Activity Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	Single-Family Residential	70.3	60	Yes
R2	Single-Family Residential	80.1	60	Yes
R3	Single-Family Residential	79.5	60	Yes
R4	Semi-Residential/ Commercial	77.7	70	Yes
R5	Semi-Residential/ Commercial	74.0	70	Yes
R5	Semi-Residential/ Commercial	79.5	70	Yes

1. Noise receiver locations are shown on Figure 4.11-6.
2. Estimated construction noise levels during peak operating conditions, as shown on Table 4.11-12.
3. Construction noise standards as shown on Table 4.11-6 for construction lasting greater than 10 days.
4. Do the estimated Project construction noise levels meet the construction noise level thresholds?
(Urban Crossroads, 2019, Table 11-8)



Figure 4.11-6



NOT TO SCALE



CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 through 7-16 of the Project's NIA (*Technical Appendix J*) present a summary of the exterior traffic noise levels, without barrier attenuation, for the study area roadway segments analyzed from the without Project to the with Project conditions in each traffic scenarios. Appendix 7.1 to the Project's NIA includes a summary of the traffic noise level contours for each of the 16 traffic scenarios. (Urban Crossroads, 2019, pp. 45-46)

Existing Condition Project Traffic Noise Levels

Table 7-1 of the Project's NIA (*Technical Appendix J*) presents the Existing without Project conditions CNEL noise levels. As shown, the exterior noise levels are shown to range from 49.9 to 74.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. (Urban Crossroads, 2019, p. 62)

Existing Plus Project Phase 1 Traffic Noise Levels

Table 7-2 of the Project's NIA (*Technical Appendix J*) shows the Existing with Phase 1 Project conditions would range from 49.9 to 74.7 dBA CNEL. As shown on Table 4.11-14, *Existing Plus Project Phase 1-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 0.1 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under Existing with Phase 1 conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 62)

Existing Plus Project Phase 2 Traffic Noise Levels

Table 7-3 of the Project's NIA (*Technical Appendix J*) shows the Existing with Phase 2 Project conditions would range from 49.9 to 74.7 dBA CNEL. As shown on Table 4.11-15, *Existing Plus Project Phase 2-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 0.2 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under Existing with Phase 2 conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 62)

Existing Plus Project Buildout Traffic Noise Levels

Table 7-4 of the Project's NIA (*Technical Appendix J*) shows the Existing with Project Buildout conditions would range from 52.9 to 74.7 dBA CNEL. As shown on Table 4.11-16, *Existing Plus Project Buildout-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 3.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under Existing with Project Buildout conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 62)



Table 4.11-14 Existing Plus Project Phase 1-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	69.3	69.4	0.1	Yes	No
2	Lake St.	s/o Nichols Rd.	70.4	70.4	0.0	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.3	70.3	0.0	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.2	58.2	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	49.9	49.9	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.0	67.0	0.0	No	No
7	Collier Av.	s/o Riverside Dr.	70.3	70.3	0.0	Yes	No
8	Collier Av.	s/o Central Av.	67.5	67.5	0.0	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.1	60.1	0.0	Yes	No
10	Dexter Av.	n/o Central Av.	71.3	71.3	0.0	No	No
11	Nichols Rd.	e/o Lake St.	64.8	64.8	0.0	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	65.8	65.8	0.0	Yes	No
13	Nichols Rd.	w/o Collier Av.	65.9	65.9	0.0	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.1	55.1	0.0	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	67.9	67.9	0.0	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	68.7	68.7	0.0	No	No
17	Riverside Dr.	e/o Strickland Av.	68.6	68.6	0.0	Yes	No
18	Riverside Dr.	w/o Collier Av.	68.6	68.6	0.0	No	No
19	Central Av.	w/o Collier Av.	62.8	62.8	0.0	No	No
20	Central Av.	e/o Dexter Av.	74.6	74.6	0.0	No	No
21	Central Av.	e/o Cambern Av.	74.7	74.7	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-17)



Table 4.11-15 Existing Plus Project Phase 2-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	69.3	69.4	0.1	Yes	No
2	Lake St.	s/o Nichols Rd.	70.4	70.4	0.0	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.3	70.3	0.0	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.2	58.2	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	49.9	49.9	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.0	67.2	0.2	No	No
7	Collier Av.	s/o Riverside Dr.	70.3	70.4	0.1	Yes	No
8	Collier Av.	s/o Central Av.	67.5	67.5	0.0	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.1	60.3	0.2	Yes	No
10	Dexter Av.	n/o Central Av.	71.3	71.4	0.1	No	No
11	Nichols Rd.	e/o Lake St.	64.8	64.9	0.1	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	65.8	65.9	0.1	Yes	No
13	Nichols Rd.	w/o Collier Av.	65.9	66.0	0.1	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.1	55.1	0.0	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	67.9	67.9	0.0	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	68.7	68.8	0.1	No	No
17	Riverside Dr.	e/o Strickland Av.	68.6	68.6	0.0	Yes	No
18	Riverside Dr.	w/o Collier Av.	68.6	68.6	0.0	No	No
19	Central Av.	w/o Collier Av.	62.8	62.9	0.1	No	No
20	Central Av.	e/o Dexter Av.	74.6	74.6	0.0	No	No
21	Central Av.	e/o Cambern Av.	74.7	74.7	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-18)

Table 4.11-16 Existing Plus Project Buildout-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	69.3	69.4	0.1	Yes	No
2	Lake St.	s/o Nichols Rd.	70.4	70.5	0.1	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.3	70.4	0.1	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.2	58.7	0.5	Yes	No
5	Strickland Av.	s/o Riverside Dr.	49.9	52.9	3.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.0	67.8	0.8	No	No
7	Collier Av.	s/o Riverside Dr.	70.3	70.5	0.2	Yes	No
8	Collier Av.	s/o Central Av.	67.5	67.6	0.1	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.1	61.4	1.3	Yes	No
10	Dexter Av.	n/o Central Av.	71.3	71.5	0.2	No	No
11	Nichols Rd.	e/o Lake St.	64.8	65.5	0.7	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	65.8	66.4	0.6	Yes	No
13	Nichols Rd.	w/o Collier Av.	65.9	66.6	0.7	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.1	55.8	0.7	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	67.9	68.0	0.1	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	68.7	68.8	0.1	No	No
17	Riverside Dr.	e/o Strickland Av.	68.6	68.8	0.2	Yes	No
18	Riverside Dr.	w/o Collier Av.	68.6	68.8	0.2	No	No
19	Central Av.	w/o Collier Av.	62.8	63.0	0.2	No	No
20	Central Av.	e/o Dexter Av.	74.6	74.7	0.1	No	No
21	Central Av.	e/o Cambern Av.	74.7	74.7	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-19)

☐ **Existing Plus Ambient Condition Project Traffic Noise Levels**

EA 2020 With Phase 1 Traffic Noise Levels

Table 7-5 of the Project's NIA (*Technical Appendix J*) presents the EA 2020 without Project conditions CNEL noise levels, which are expected to range from 49.9 to 74.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 of the NIA shows the EA 2020 with Phase 1 Project conditions would range from 49.9 to 74.8 dBA CNEL. As shown on Table 4.11-17, *EA 2020 Off-Site Phase 1-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 0.4 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-

related noise level increases are considered less than significant under EA 2020 with Phase 1 conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 66)

Table 4.11-17 EA 2020 Off-Site Phase 1-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	69.5	69.5	0.0	Yes	No
2	Lake St.	s/o Nichols Rd.	70.6	70.6	0.0	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.4	70.4	0.0	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.5	58.5	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	49.9	49.9	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.2	67.2	0.0	No	No
7	Collier Av.	s/o Riverside Dr.	70.5	70.5	0.0	Yes	No
8	Collier Av.	s/o Central Av.	67.6	67.6	0.0	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.2	60.3	0.1	Yes	No
10	Dexter Av.	n/o Central Av.	71.5	71.5	0.0	No	No
11	Nichols Rd.	e/o Lake St.	65.0	65.0	0.0	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	66.0	66.0	0.0	Yes	No
13	Nichols Rd.	w/o Collier Av.	66.1	66.1	0.0	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.1	55.5	0.4	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	68.1	68.1	0.0	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	68.9	68.9	0.0	No	No
17	Riverside Dr.	e/o Strickland Av.	68.7	68.8	0.1	Yes	No
18	Riverside Dr.	w/o Collier Av.	68.7	68.8	0.1	No	No
19	Central Av.	w/o Collier Av.	63.0	63.0	0.0	No	No
20	Central Av.	e/o Dexter Av.	74.8	74.8	0.0	No	No
21	Central Av.	e/o Cambern Av.	74.8	74.8	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-20)

EA 2021 With Phase 2 Traffic Noise Levels

Table 7-7 of the Project's NIA (*Technical Appendix J*) presents the EA 2021 without Project conditions CNEL noise levels which are expected to range from 49.9 to 74.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-8 of the Project's NIA shows the EA 2021 with Phase 2 Project conditions would range from 49.9 to 74.9 dBA CNEL. As shown on Table 4.11-18, *EA 2021 Off-Site Phase 2-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up

to 0.4 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under EA 2021 with Phase 2 conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 66)

Table 4.11-18 EA 2021 Off-Site Phase 2-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	69.6	69.6	0.0	Yes	No
2	Lake St.	s/o Nichols Rd.	70.6	70.7	0.1	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.5	70.6	0.1	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.5	58.5	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	49.9	49.9	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.2	67.4	0.2	No	No
7	Collier Av.	s/o Riverside Dr.	70.6	70.6	0.0	Yes	No
8	Collier Av.	s/o Central Av.	67.7	67.8	0.1	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.3	60.6	0.3	Yes	No
10	Dexter Av.	n/o Central Av.	71.6	71.6	0.0	No	No
11	Nichols Rd.	e/o Lake St.	65.1	65.2	0.1	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	66.1	66.1	0.0	Yes	No
13	Nichols Rd.	w/o Collier Av.	66.1	66.2	0.1	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.1	55.5	0.4	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	68.1	68.2	0.1	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	69.0	69.0	0.0	No	No
17	Riverside Dr.	e/o Strickland Av.	68.8	68.9	0.1	Yes	No
18	Riverside Dr.	w/o Collier Av.	68.8	68.9	0.1	No	No
19	Central Av.	w/o Collier Av.	63.1	63.2	0.1	No	No
20	Central Av.	e/o Dexter Av.	74.9	74.9	0.0	No	No
21	Central Av.	e/o Cambern Av.	74.9	74.9	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-21)

EA 2024 With Project Buildout Traffic Noise Levels

Table 7-9 of the Project's NIA (*Technical Appendix J*) presents the EA 2024 without Project conditions CNEL noise levels which are expected to range from 49.9 to 75.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-10 of the Project's NIA shows the EA 2024 with Project Buildout conditions would range from 52.9 to 75.2 dBA CNEL. As shown on Table 4.11-19, EA

2021 Off-Site Project Buildout-Related Traffic Noise Impacts, the Project would generate a noise level increase of up to 3.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under EA 2024 with Project Buildout conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 66)

Table 4.11-19 EA 2021 Off-Site Project Buildout-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	69.8	69.9	0.1	Yes	No
2	Lake St.	s/o Nichols Rd.	70.9	71.0	0.1	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.8	70.9	0.1	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.7	59.3	0.6	Yes	No
5	Strickland Av.	s/o Riverside Dr.	49.9	52.9	3.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.5	68.3	0.8	No	No
7	Collier Av.	s/o Riverside Dr.	70.9	71.0	0.1	Yes	No
8	Collier Av.	s/o Central Av.	68.0	68.1	0.1	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.6	61.6	1.0	Yes	No
10	Dexter Av.	n/o Central Av.	71.8	72.0	0.2	No	No
11	Nichols Rd.	e/o Lake St.	65.3	65.9	0.6	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	66.3	66.9	0.6	Yes	No
13	Nichols Rd.	w/o Collier Av.	66.4	67.0	0.6	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	56.1	56.4	0.3	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	68.4	68.5	0.1	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	69.2	69.3	0.1	No	No
17	Riverside Dr.	e/o Strickland Av.	69.1	69.3	0.2	Yes	No
18	Riverside Dr.	w/o Collier Av.	69.1	69.3	0.2	No	No
19	Central Av.	w/o Collier Av.	63.4	63.5	0.1	No	No
20	Central Av.	e/o Dexter Av.	75.1	75.2	0.1	No	No
21	Central Av.	e/o Cambern Av.	75.2	75.2	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-22)



☐ **EA Plus Cumulative Condition Project Traffic Noise Levels**

EAC 2020 With Phase 1 Traffic Noise Levels

Table 7-11 of the Project's NIA (*Technical Appendix J*) presents the EAC 2020 without Project conditions CNEL noise levels which are expected to range from 51.7 to 74.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-12 of the Project's NIA shows the EAC 2020 with Phase 1 Project conditions would range from 51.7 to 74.8 dBA CNEL. As shown on Table 4.11-20, *EAC 2020 Off-Site Phase 1-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 0.4 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under EAC 2020 with Phase 1 conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 70)

EAC 2021 With Phase 2 Traffic Noise Levels

Table 7-13 of the Project's NIA (*Technical Appendix J*) presents the EAC 2021 without Project conditions CNEL noise levels which are expected to range from 51.7 to 74.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-14 of the Project's NIA shows the EAC 2021 with Phase 2 Project conditions would range from 51.7 to 74.9 dBA CNEL. As shown on Table 4.11-21, *EAC 2021 Off-Site Phase 2-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 0.3 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under EAC 2021 with Phase 2 conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 70)

EAC 2024 With Project Buildout Traffic Noise Levels

Table 7-15 of the Project's NIA (*Technical Appendix J*) presents the EAC 2024 without Project conditions CNEL noise levels which are expected to range from 54.7 to 75.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-16 of the Project's NIA shows the EAC 2024 with Project Buildout conditions would range from 54.7 to 75.2 dBA CNEL. As shown on Table 4.11-22, *EAC 2024 Off-Site Project Buildout-Related Traffic Noise Impacts*, the Project would generate a noise level increase of up to 0.2 dBA CNEL on the study area roadway segments. Based on the significance criteria in subsection 4.11.4, the Project-related noise level increases are considered less than significant under EAC 2024 with Project Buildout conditions at the land uses adjacent to roadways conveying Project traffic. (Urban Crossroads, 2019, p. 70)

2. *On-Site Traffic Noise Impacts*

☐ **On-Site Exterior Noise Analysis**

Using the FHWA noise prediction model and the parameters outlined in Tables 6-5 to 6-7 of the Project's NIA (*Technical Appendix J*), the expected future exterior noise levels for the Project's residential and hotel uses were calculated. Table 4.11-23, *On-Site Exterior Traffic Noise Levels*, presents a summary of future exterior noise level impacts at the single-family residential outdoor living areas (backyards) and first-floor building façade of the hotel building. The on-site transportation noise level impacts indicate that the uses adjacent to

I-15 and Nichols Road would experience unmitigated exterior noise levels ranging from 54.8 to 70.1 dBA CNEL.

Table 4.11-20 EAC 2020 Off-Site Phase 1-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	70.0	70.0	0.0	Yes	No
2	Lake St.	s/o Nichols Rd.	71.0	71.0	0.0	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	70.8	70.8	0.0	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.5	58.5	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	51.7	51.7	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.5	67.5	0.0	No	No
7	Collier Av.	s/o Riverside Dr.	70.8	70.8	0.0	Yes	No
8	Collier Av.	s/o Central Av.	68.0	68.0	0.0	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.2	60.3	0.1	Yes	No
10	Dexter Av.	n/o Central Av.	71.5	71.5	0.0	No	No
11	Nichols Rd.	e/o Lake St.	66.6	66.6	0.0	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	67.3	67.3	0.0	Yes	No
13	Nichols Rd.	w/o Collier Av.	67.4	67.4	0.0	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.1	55.5	0.4	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	68.2	68.2	0.0	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	69.1	69.1	0.0	No	No
17	Riverside Dr.	e/o Strickland Av.	68.9	68.9	0.0	Yes	No
18	Riverside Dr.	w/o Collier Av.	68.9	69.0	0.1	No	No
19	Central Av.	w/o Collier Av.	63.1	63.1	0.0	No	No
20	Central Av.	e/o Dexter Av.	74.8	74.8	0.0	No	No
21	Central Av.	e/o Cambern Av.	74.8	74.8	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-23)



Table 4.11-21 EAC 2021 Off-Site Phase 2-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	70.3	70.3	0.0	Yes	No
2	Lake St.	s/o Nichols Rd.	71.2	71.2	0.0	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	71.1	71.1	0.0	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	58.7	58.7	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	51.7	51.7	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	67.6	67.8	0.2	No	No
7	Collier Av.	s/o Riverside Dr.	71.0	71.0	0.0	Yes	No
8	Collier Av.	s/o Central Av.	68.2	68.2	0.0	No	No
9	El Toro Rd.	s/o Tereticornis Av.	60.3	60.6	0.3	Yes	No
10	Dexter Av.	n/o Central Av.	71.6	71.6	0.0	No	No
11	Nichols Rd.	e/o Lake St.	67.3	67.3	0.0	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	67.9	67.9	0.0	Yes	No
13	Nichols Rd.	w/o Collier Av.	68.0	68.0	0.0	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	55.5	55.5	0.0	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	68.4	68.4	0.0	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	69.2	69.3	0.1	No	No
17	Riverside Dr.	e/o Strickland Av.	69.1	69.1	0.0	Yes	No
18	Riverside Dr.	w/o Collier Av.	69.1	69.2	0.1	No	No
19	Central Av.	w/o Collier Av.	63.2	63.3	0.1	No	No
20	Central Av.	e/o Dexter Av.	74.9	74.9	0.0	No	No
21	Central Av.	e/o Cambern Av.	74.9	74.9	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

2. Significance Criteria (subsection 4.11.4).

(Urban Crossroads, 2019, Table 7-24)



Table 4.11-22 EAC 2024 Off-Site Project Buildout-Related Traffic Noise Impacts

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
			No Project	With Project	Project Addition		
1	Lake St.	n/o Nichols Rd.	71.2	71.2	0.0	Yes	No
2	Lake St.	s/o Nichols Rd.	72.0	72.0	0.0	Yes	No
3	Lake St.	s/o Alberhill Ranch Rd.	71.9	71.9	0.0	Yes	No
4	Alberhill Ranch Rd.	s/o Nichols Rd.	59.5	59.5	0.0	Yes	No
5	Strickland Av.	s/o Riverside Dr.	54.7	54.7	0.0	Yes	No
6	Collier Av.	s/o Nichols Rd.	68.8	68.9	0.1	No	No
7	Collier Av.	s/o Riverside Dr.	71.6	71.6	0.0	Yes	No
8	Collier Av.	s/o Central Av.	68.9	68.9	0.0	No	No
9	El Toro Rd.	s/o Tereticornis Av.	61.5	61.7	0.2	Yes	No
10	Dexter Av.	n/o Central Av.	72.0	72.0	0.0	No	No
11	Nichols Rd.	e/o Lake St.	69.1	69.1	0.0	Yes	No
12	Nichols Rd.	e/o Alberhill Ranch Rd.	69.6	69.6	0.0	Yes	No
13	Nichols Rd.	w/o Collier Av.	69.7	69.7	0.0	Yes	No
14	Tereticornis Av.	e/o El Toro Rd.	56.4	56.4	0.0	Yes	No
15	Riverside Dr.	w/o Lakeshore Dr.	68.8	68.8	0.0	No	No
16	Riverside Dr.	e/o Lakeshore Dr.	69.8	69.8	0.0	No	No
17	Riverside Dr.	e/o Strickland Av.	69.7	69.8	0.1	Yes	No
18	Riverside Dr.	w/o Collier Av.	69.8	69.8	0.0	No	No
19	Central Av.	w/o Collier Av.	63.6	63.7	0.1	No	No
20	Central Av.	e/o Dexter Av.	75.2	75.2	0.0	No	No
21	Central Av.	e/o Cambern Av.	75.2	75.2	0.0	Yes	No

1. The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
2. Significance Criteria (subsection 4.11.4).
(Urban Crossroads, 2019, Table 7-25)

Table 4.11-23 On-Site Exterior Traffic Noise Levels

Receiver Location	Roadway	Unmitigated Exterior Noise Levels (dBA CNEL)	Mitigated Exterior Noise Levels (dBA CNEL)	Barrier Height (Feet)	Residential Threshold Exceeded? (60 dBA CNEL)
Hotel	I-15 Fwy.	63.0	— ¹	— ¹	— ¹
91	I-15 Fwy.	54.8	— ²	— ²	No
99	I-15 Fwy.	59.7	— ²	— ²	No
80	Nichols Rd.	70.1	59.9	8.0	No
45	Nichols Rd.	69.8	59.8	8.0	No
35	Nichols Rd.	68.1	58.0	8.0	No

¹ The City of Lake Elsinore does not identify exterior noise level limits for hotel uses. No exterior noise mitigation is required. Unmitigated exterior noise levels at the hotel building include the attenuation provided by the elevation changes and earthen berm between the I-15 Freeway and the Project site.

² The exterior noise level satisfies the City of Lake Elsinore 60 dBA CNEL exterior noise level standard for residential uses without any exterior noise mitigation. Unmitigated exterior noise levels at lots 91 and 99 include the attenuation provided by the elevation changes and earthen berm between the I-15 Freeway and the Project site.

(Urban Crossroads, 2019, Table 8-1)

As a general matter, CEQA does not require the analysis of the environment's impact on the proposed Project (see the decision reached by the Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, Case No. S213478). Therefore, CEQA does not require that the potential noise impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the proposed Project. Nonetheless, General Plan Policy 7.1 requires new development to meet the standards set forth in the Lake Elsinore Noise and Land Use Compatibility Matrix (see Figure 4.11-4) and Interior and Exterior Noise Standards (see Table 4.11-5). Because proposed residential dwelling units would be exposed to exterior noise levels exceeding the limits specified by General Plan Policy 7.1 (i.e., exterior noise level limit of 60 dBA), Project impacts would be significant. The on-site traffic noise analysis calculations are provided in Appendix 8.1 of the Project's NIA. (Urban Crossroads, 2019, p. 75)

The future hotel use within the Project site would experience on-site traffic noise levels approaching 63.0 dBA CNEL. Based on Table 3-1 of the City of Lake Elsinore General Plan Public Safety and Welfare Element, hotel uses experiencing unmitigated exterior noise levels ranging from 60 to 70 dBA CNEL are considered normally compatible, and detailed analysis of interior noise reduction measures should be provided. At the time of analysis, the location and detailed building plans for the hotel building were not available. Therefore, it is possible that the interior noise levels at the hotel could exceed 45 dBA CNEL. As noted above, although CEQA does not require the analysis of the environment's impact on the proposed Project, and based on the projected exterior noise levels affecting the hotel building, the hotel may experience interior noise levels that exceed the limits specified by General Plan Policy 7.1 (i.e., 45 dBA interior noise level-limit). This is evaluated as a potentially significant impact for which mitigation would be required. (Urban Crossroads, 2019, p. 75)



☐ **On-Site Interior Noise Analysis**

To ensure that the interior noise levels comply with the City of Lake Elsinore interior noise level standards, future noise levels were calculated at the first, second, third, and fourth floor and above building facades. The proposed residential uses would have a maximum height of two stories, while the proposed hotel use could have up to four stories. (Urban Crossroads, 2019, p. 76)

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 assemblies free of cut outs or openings.

Table 4.11-24 through Table 4.11-27 indicate that buildings facing I-15 and Nichols Road would require a windows-closed condition and a means of mechanical ventilation (e.g. air conditioning). Table 4.11-24, *First Floor Interior Noise Level Impacts (dBA CNEL)*, shows that the future unmitigated noise levels at the first-floor building façade are expected to range from 54.6 to 63.0 dBA CNEL. Table 4.11-25, *Second Floor Interior Noise Level Impacts (dBA CNEL)*, shows that the future noise levels at the second-floor building façade are expected to range from 55.5 to 72.8 dBA CNEL, and Table 4.11-26, *Third Floor Interior Noise Level Impacts (dBA CNEL)*, shows that the third-floor noise levels at the hotel would approach 72.8 dBA CNEL. Fourth floor and above building façades of the hotel building would experience noise levels approaching 67.5 dBA CNEL, as shown on Table 4.11-27, *Fourth Floor and Above Interior Noise Level Impacts (dBA CNEL)*. As previously indicated, CEQA does not require that the potential noise impacts from the environment (unrelated to the Project) be analyzed with respect to their effect(s) on future residents of the proposed Project. Nonetheless, the interior noise levels projected for the proposed residences and the hotel use would exceed the interior noise limits established by General Plan Policy 7.1. Therefore, Project impacts due to interior noise levels would be significant prior to mitigation for residential lots facing Nichols Road and/or I-15 and the proposed hotel.

3. Project Operational Impacts

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. The analysis of the Project's operational impacts is based on the worst-case noise environment with the roof-top air conditioning units, parking lot vehicle movements, a drive-through speakerphone, gas station activity, a car wash, and park activity all operating simultaneously. Reference noise levels used in the analysis are presented on Table 4.11-28, *Reference Noise Level Measurements*, and are described in detail in subsections 10.1.1 through 10.1.6 of the Project's NIA (*Technical Appendix J*). Noise level impacts from Project operational sources would vary throughout the day. (Urban Crossroads, 2019, p. 81)



Table 4.11-24 First Floor Interior Noise Level Impacts (dBA CNEL)

Receiver Location	Noise Level at Façade ¹	Required Interior NR ²	Estimated Interior NR ³	Upgraded Windows ⁴	Interior Noise Level ⁵
Hotel	63.0	18.0	30	Yes	33.0
91	54.6	9.6	25	No	29.6
99	59.5	14.5	25	No	34.5
80	59.7	14.7	25	No	34.7
45	59.7	14.7	25	No	34.7
35	59.0	14.0	25	No	34.0

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 required to satisfy the 45 dBA CNEL interior noise standards.

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

(Urban Crossroads, 2019, Table 8-2)

Table 4.11-25 Second Floor Interior Noise Level Impacts (dBA CNEL)

Receiver Location	Noise Level at Façade ¹	Required Interior NR ²	Estimated Interior NR ³	Upgraded Windows ⁴	Interior Noise Level ⁵
Hotel	72.8	27.8	30	Yes	42.8
91	55.5	10.5	25	No	30.5
99	60.9	15.9	25	No	35.9
80	69.3	24.3	25	No	44.3
45	69.0	24.0	25	No	44.0
35	66.6	21.6	25	No	41.6

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 required to satisfy the 45 dBA CNEL interior noise standards.

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

(Urban Crossroads, 2019, Table 8-3)



Table 4.11-26 Third Floor Interior Noise Level Impacts (dBA CNEL)

Receiver Location	Noise Level at Façade ¹	Required Interior NR ²	Estimated Interior NR ³	Upgraded Windows ⁴	Interior Noise Level ⁵
Hotel	72.8	27.8	30	Yes	42.8
91	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
99	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
80	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
45	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
35	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶

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 required to satisfy the 45 dBA CNEL interior noise standards.

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.

⁶ The given receiver location is not anticipated to have third floor interior areas.

"NR" = Noise Reduction

(Urban Crossroads, 2019, Table 8-4)

Table 4.11-27 Fourth Floor and Above Interior Noise Level Impacts (dBA CNEL)

Receiver Location	Noise Level at Façade ¹	Required Interior NR ²	Estimated Interior NR ³	Upgraded Windows ⁴	Interior Noise Level ⁵
Hotel	72.8	27.8	30	Yes	42.8
91	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
99	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
80	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
45	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶
35	— ⁶	— ⁶	— ⁶	— ⁶	— ⁶

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 required to satisfy the 45 dBA CNEL interior noise standards.

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.

⁶ The given receiver location is not anticipated to have fourth floor interior areas.

"NR" = Noise Reduction

(Urban Crossroads, 2019, Table 8-5)



Table 4.11-28 Reference Noise Level Measurements

Noise Source	Measurement Duration (hh:mm:ss)	Distance From Source (Feet)	Noise Source Height (Feet)	Reference Noise Levels (dBA L ₅₀)	
				@ Ref. Dist.	@ 50 Feet
Roof-Top Air Conditioning Units ¹	96:00:00	5'	5'	74.4	54.4
Parking Lot Vehicle Movements ²	00:15:00	5'	4'	56.7	41.7
Drive-Through Speakerphone ³	02:00:00	15'	3'	60.9	50.4
Gas Station Activity ⁴	00:03:00	5'	5'	65.6	45.6
Car Wash ⁵	00:01:05	50'	6'	77.6	77.6
Park Activity ⁶	00:15:00	5'	4'	61.7	41.7

¹ As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

² As measured by Urban Crossroads, Inc. on 5/30/2012 at the Laguna Niguel Walmart located at 27470 Alicia Parkway.

³ As measured by Urban Crossroads, Inc. on 12/19/2014 at the Panera Bread located at 423 Associated Road in Brea.

⁴ As measured by Urban Crossroads, Inc. on 4/26/2016 at the ARCO gas station located at 6501 Quail Hill Parkway in Irvine.

⁵ As measured by Urban Crossroads, Inc. on 5/16/2017 at the Shell gas station with drive-through car wash on Rancho Parkway in the City of Lake Forest.

⁶ As measured by Urban Crossroads, Inc. on 10/8/2014 at the Founders Park in the unincorporated community of Ladera Ranch in the County of Orange.

(Urban Crossroads, 2019, Table 10-1)

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. Sensitive Receptor locations in relation to Project operational noise sources are depicted on Figure 4.11-7, *Operational Noise Source and Receiver Locations*. The operational noise level calculations shown on Table 4.11-29, *Unmitigated Project Operational Noise Levels*, account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL₁): (Urban Crossroads, 2019, p. 85)

$$SPL_2 = SPL_1 - 20\log(D_2/D_1)$$

Where SPL₂ is the resulting noise level after attenuation, SPL₁ is the source noise level, D₂ is the distance to the reference sound pressure level (SPL₁), and D₁ is the distance to the receiver location. Table 4.11-29 indicates that the noise levels associated with the roof-top air conditioning units, parking lot vehicle movements, a drive-through speakerphone, gas station activity, a car wash, and park activity are expected to range from 42.6 to 47.3 dBA L₅₀ at the sensitive off-site receiver locations. The operational noise level calculation worksheets are included in Appendix 10.1 to the Project's NIA (*Technical Appendix J*). (Urban Crossroads, 2019, p. 85)

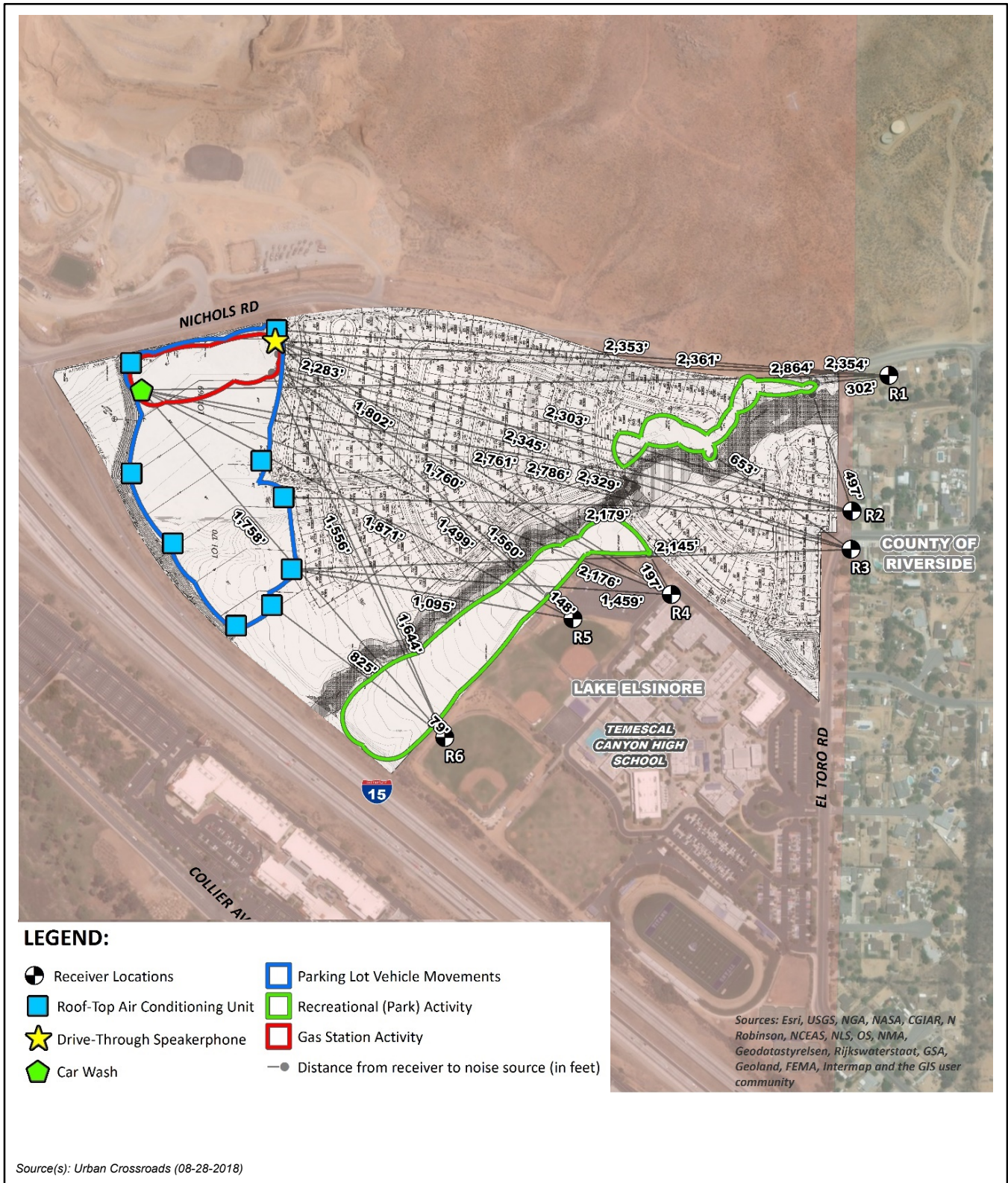


Figure 4.11-7



NOT TO SCALE



OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



Table 4.11-29 Unmitigated Project Operational Noise Levels

Receiver Location ¹	Land Use	Noise Sources ²	Operational Noise Levels (dBA) ³				
			L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₅ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)
R1	SFR	Roof-Top Air Conditioning Units	20.9	22.6	23.9	24.2	24.7
		Parking Lot Vehicle Movements	16.6	20.6	23.6	27.0	39.4
		Drive-Through Speakerphone	17.0	18.2	19.7	21.4	22.5
		Gas Station Activity	12.1	13.4	16.0	20.9	28.9
		Car Wash	42.4	43.1	43.7	44.0	44.2
		Park Activity	26.1	28.5	31.4	34.1	38.3
		Combined Noise Level:	42.6	43.3	44.1	44.6	46.3
R2	SFR	Roof-Top Air Conditioning Units	21.6	23.3	24.6	24.9	25.4
		Parking Lot Vehicle Movements	17.1	21.1	24.1	27.5	39.9
		Drive-Through Speakerphone	17.2	18.4	19.9	21.6	22.7
		Gas Station Activity	12.4	13.7	16.3	21.2	29.2
		Car Wash	42.8	43.5	44.1	44.4	44.6
		Park Activity	21.8	24.2	27.1	29.8	34.0
		Combined Noise Level:	42.9	43.6	44.3	44.7	46.3
R3	SFR	Roof-Top Air Conditioning Units	21.8	23.5	24.8	25.1	25.6
		Parking Lot Vehicle Movements	17.2	21.2	24.2	27.6	40.0
		Drive-Through Speakerphone	17.0	18.2	19.7	21.4	22.5
		Gas Station Activity	12.2	13.5	16.1	21.0	29.0
		Car Wash	42.7	43.4	44.0	44.3	44.5
		Park Activity	19.4	21.8	24.7	27.4	31.6
		Combined Noise Level:	42.8	43.5	44.2	44.6	46.1
R4	School	Roof-Top Air Conditioning Units	25.1	26.8	28.1	28.4	28.9
		Parking Lot Vehicle Movements	19.7	23.7	26.7	30.1	42.5
		Drive-Through Speakerphone	19.3	20.5	22.0	23.7	24.8
		Gas Station Activity	14.7	16.0	18.6	23.5	31.5
		Car Wash	44.8	45.5	46.1	46.4	46.6
		Park Activity	29.8	32.2	35.1	37.8	42.0
		Combined Noise Level:	45.0	45.8	46.6	47.1	49.1
R5	School	Roof-Top Air Conditioning Units	27.6	29.3	30.6	30.9	31.4
		Parking Lot Vehicle Movements	21.6	25.6	28.6	32.0	44.4
		Drive-Through Speakerphone	20.6	21.8	23.3	25.0	26.1
		Gas Station Activity	16.1	17.4	20.0	24.9	32.9
		Car Wash	46.1	46.8	47.4	47.7	47.9
		Park Activity	32.3	34.7	37.6	40.3	44.5
		Combined Noise Level:	46.4	47.2	48.0	48.6	50.8
R6	School	Roof-Top Air Conditioning Units	30.1	31.8	33.1	33.4	33.9
		Parking Lot Vehicle Movements	23.4	27.4	30.4	33.8	46.2
		Drive-Through Speakerphone	20.1	21.3	22.8	24.5	25.6
		Gas Station Activity	15.7	17.0	19.6	24.5	32.5
		Car Wash	46.7	47.4	48.0	48.3	48.5
		Park Activity	37.7	40.1	43.0	45.7	49.9
		Combined Noise Level:	47.3	48.3	49.4	50.4	53.3

1. See Figure 4.11-7 for the receiver and noise source locations.

2. Reference noise sources as shown on Table 4.11-28.

3. Stationary source noise level calculations are provided in Appendix 10.1 of the Project's NIA (*Technical Appendix J*).

"SFR" = Single-Family Residential
(Urban Crossroads, 2019, Table 10-2)



To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level threshold based on the City of Lake Elsinore. Table 4.11-30, *Unmitigated Operational Noise Level Compliance*, shows the operational noise levels associated with the proposed Project would exceed the nighttime exterior noise level standards at receiver locations R1 to R3. All other receiver locations are shown to experience operational noise levels below the daytime and nighttime exterior noise level standards. Therefore, Project operational-related noise represents a potentially significant impact prior to mitigation. (Urban Crossroads, 2019, p. 87)

Table 4.11-30 Unmitigated Operational Noise Level Compliance

Receiver Location ¹	Land Use	Noise Sources ²	Operational Noise Levels (dBA) ³				
			L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)
R6	School	Roof-Top Air Conditioning Units	30.1	31.8	33.1	33.4	33.9
		Parking Lot Vehicle Movements	23.4	27.4	30.4	33.8	46.2
		Drive-Through Speakerphone	20.1	21.3	22.8	24.5	25.6
		Gas Station Activity	15.7	17.0	19.6	24.5	32.5
		Car Wash	46.7	47.4	48.0	48.3	48.5
		Park Activity	37.7	40.1	43.0	45.7	49.9
		Combined Noise Level:	47.3	48.3	49.4	50.4	53.3

1. See Figure 4.11-7 for the receiver and noise source locations.

2. Estimated Project operational noise levels as shown on Table 4.11-29.

3. Do the Project operational noise levels satisfy the operational noise level standards (Table 4.11-3)?

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "SFR" = Single-Family Residential (Urban Crossroads, 2019, Table 10-3)

4. Project Operational Noise Level Contributions

To describe the Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements for the off-site receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. Instead, they must be logarithmically added using the following base equation: (Urban Crossroads, 2019, p. 90)

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \dots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at receiver locations when unmitigated Project-source noise is added to the ambient daytime and nighttime conditions are presented on Table 4.11-31, *Unmitigated Daytime Operational Noise Level Contributions*, and Table 4.11-32, *Unmitigated Nighttime Operational Noise Level Contributions*, respectively. (Urban Crossroads, 2019, p. 90)

Table 4.11-31 Unmitigated Daytime Operational Noise Level Contributions

Receiver Location ¹	Unmitigated Project Operational Noise Level (dBA L ₅₀) ²	Measurement Location ³	Reference Ambient Noise Levels (dBA L ₅₀) ⁴	Combined Project and Ambient (dBA L ₅₀) ⁵	Project Increase (dBA L ₅₀) ⁶	Threshold ⁷	Threshold Exceeded? ⁷
R1	42.6	L4	50.9	51.5	0.6	5.0	No
R2	42.9	L4	50.9	51.5	0.6	5.0	No
R3	42.8	L5	54.7	55.0	0.3	5.0	No
R4	45.0	L6	61.5	61.6	0.1	3.0	No
R3	46.4	L6	61.5	61.6	0.1	3.0	No
R4	47.3	L6	61.5	61.7	0.2	3.0	No

1. See Figure 4.11-5 for the sensitive receiver locations.
2. Total Project operational noise levels as shown on Table 4.11-29.
3. Reference noise level measurement locations as shown on Figure 4.11-3.
4. Observed daytime ambient noise levels as shown on Table 4.11-1.
5. Represents the combined ambient conditions plus the Project activities.
6. The noise level increase expected with the addition of the proposed Project activities.
7. FICON significance criteria as defined in Table 4.11-8, based on the ambient noise level without the Project.
(Urban Crossroads, 2019, Table 10-6)

Table 4.11-32 Unmitigated Nighttime Operational Noise Level Contributions

Receiver Location ¹	Unmitigated Project Operational Noise Level (dBA L ₅₀) ²	Measurement Location ³	Reference Ambient Noise Levels (dBA L ₅₀) ⁴	Combined Project and Ambient (dBA L ₅₀) ⁵	Project Increase (dBA L ₅₀) ⁶	Threshold ⁷	Threshold Exceeded? ⁷
R1	42.6	L4	49.9	50.6	0.7	5.0	No
R2	42.9	L4	49.9	50.7	0.8	5.0	No
R3	42.8	L5	53.7	54.0	0.3	5.0	No
R4	45.0	L6	57.8	58.0	0.2	5.0	No
R3	46.4	L6	57.8	58.1	0.3	5.0	No
R4	47.3	L6	57.8	58.2	0.4	5.0	No

1. See Figure 4.11-5 for the sensitive receiver locations.
2. Total Project operational noise levels as shown on Table 4.11-29.
3. Reference noise level measurement locations as shown on Figure 4.11-3.
4. Observed daytime ambient noise levels as shown on Table 4.11-1.
5. Represents the combined ambient conditions plus the Project activities.
6. The noise level increase expected with the addition of the proposed Project activities.
7. FICON significance criteria as defined in Table 4.11-8, based on the ambient noise level without the Project.
(Urban Crossroads, 2019, Table 10-7)

As indicated on Table 4.11-31 and Table 4.11-32, the Project would contribute operational noise level increases over the existing ambient noise levels which ranging from 0.1 to 0.8 dBA L₅₀ during the daytime hours and nighttime hours. Since the Project-related operational noise level contributions would satisfy the



significance criteria discussed in subsection 4.11.4, the increases at the sensitive receiver locations would be less than significant.

Threshold b.: Would the Project result in the generation of excessive ground borne vibration or ground borne noise levels?

The proposed Project would only have the potential to result in excessive ground borne vibration or ground borne noise levels during construction activities, as Project operational activities would not involve a large number of large trucks or uneven surfaces that could produce ground borne vibration affecting nearby sensitive receptors. The Project's potential to result in near-term construction-related vibration impacts is discussed below.

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: (Urban Crossroads, 2019, p. 105)

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. (Urban Crossroads, 2019, p. 105)
- 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. (Urban Crossroads, 2019, p. 105)

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). 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 previously provided on Table 4.11-11 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 4.11-33, *Unmitigated Construction Equipment Vibration Levels*, presents the expected Project related vibration levels at each of the sensitive receiver locations. (Urban Crossroads, 2019, p. 105)

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 66 to 203 feet from the Project construction activities, construction vibration velocity levels are expected to approach 0.021 in/sec (PPV), as shown on Table 4.11-33. To assess the human perception of vibration levels in PPV, the velocities are converted to RMS vibration levels based on the Caltrans Transportation and Construction Vibration Guidance Manual conversion factor of 0.71. Table 4.11-33 shows the construction vibration levels in RMS are expected to approach 0.015 in/sec (RMS) at the nearby receiver locations. Based on the vibration threshold of 0.01 in/sec, the construction-related vibration impacts are considered potentially significant at

receiver locations R2, R3, and R6. This is evaluated as a potentially significant impact prior to mitigation. (Urban Crossroads, 2019, p. 105)

Table 4.11-33 Unmitigated Construction Equipment Vibration Levels

Receiver Location ¹	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec) ²					RMS Velocity Levels (in/sec) ³	Threshold (RMS)	Threshold Exceeded? ⁴
		Small Bulldozer (<80k lbs)	Jack-hammer	Loaded Trucks	Large Bulldozer (>80k lbs)	Peak Vibration (PPV)			
R1	203'	0.000	0.002	0.003	0.004	0.004	0.003	0.01	No
R2	66'	0.001	0.008	0.018	0.021	0.021	0.015	0.01	Yes
R3	70'	0.001	0.007	0.016	0.019	0.019	0.013	0.01	Yes
R4	87'	0.000	0.005	0.012	0.014	0.014	0.010	0.01	No
R5	132'	0.000	0.003	0.006	0.007	0.007	0.005	0.01	No
R6	70'	0.001	0.007	0.016	0.019	0.019	0.013	0.01	Yes

1. Receiver locations are shown on Figure 4.11-6.
2. Based on the Vibration Source Levels of Construction Equipment included on Table 4.11-11.
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 peak vibration exceed the maximum acceptable vibration threshold shown on Table 4.11-7? (Urban Crossroads, 2019, Table 11-10)

Threshold e. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?

Threshold applies to nearby public and private airports, if any, and the Project's land use compatibility. The closest airport is Skylark Field which is located approximately 5.7 miles southeast of the Project site. The Project site is not located within the AIA of the closest airport, Skylark Airport, and is not subject to substantial noise levels associated with airport operations. Further, the Project site is not located within an airport land use plan or within 2 miles of a public airport. The Project site would not be exposed to aircraft-related noise exceeding 55 dBA CNEL, which is considered "clearly acceptable" by the Riverside County ALUCP for residential and commercial development (ALUC, 2004, Table 2B). Accordingly, the Project would not result in the exposure of people residing or working at the Project site to excessive airport- or aircraft-related noise. Further, a review of Google Earth aerial imagery indicates that there are no private airstrips located near the Project site. Therefore, the Project does not have the potential to expose people residing or working in the Project area to excessive aircraft- or airport-related noise levels, and no impact would occur. (Urban Crossroads, 2019, p. 27; Google Earth, 2018)

4.11.7 CUMULATIVE IMPACT ANALYSIS

As evaluated under Threshold a., above, the highest construction noise levels at the potentially impacted receiver locations are expected to approach 80.1 dBA Lmax and would exceed the City of Lake Elsinore stationary construction equipment noise level standards for residential and semi-residential (school) uses



during temporary Project construction activities at receiver locations R1 to R6 (refer to Figure 4.11-6). However, as previously shown on EIR Figure 4.0-1, there are no other cumulative developments within close proximity to the Project site that could contribute to Project-related construction noise levels affecting nearby sensitive receptors. Accordingly, construction-related noise impacts would be less-than-cumulatively considerable.

As also evaluated under Threshold a., above, and as previously presented in Table 4.11-20, Table 4.11-21, and Table 4.11-22, Project-related traffic, when combined with ambient growth and cumulative development traffic, would not expose any sensitive receptors in the study area to traffic-related noise levels that exceed City standards. As such, Project impacts due to traffic-related noise would be less-than-cumulatively considerable.

Furthermore, although the analysis under Threshold a. identifies a significant impact due to on-site exterior and interior noise levels that would exceed City standards, these impacts represent the environment's impacts on the Project, and not the Project's impact on the environment. As such, there is no potential for cumulatively-considerable impacts due to on-site exterior or interior noise levels.

The analysis under Threshold a. also demonstrates that the noise levels associated with the roof-top air conditioning units, parking lot vehicle movements, a drive-through speakerphone, gas station activity, a car wash, and park activity are expected to range from 42.6 to 47.3 dBA L_{50} at the sensitive off-site receiver locations. As previously shown in Table 4.11-30, the operational noise levels associated with the proposed Project would exceed the nighttime exterior noise level standards at receiver locations R1 to R3. However, the analysis presented in Table 4.11-31 and Table 4.11-32 shows that Project operational noise sources, when combined with ambient noise sources, would be less-than-cumulatively considerable.

The analysis under Threshold b. demonstrates that Project-related ground borne vibration and noise levels would exceed City standards at nearby sensitive receptors. However, and as previously shown in EIR Figure 4.0-1, there are no cumulative development projects within the Project vicinity that could be under construction simultaneously with the Project and that could contribute to the Project's vibration impacts. As such, Project-related vibration impacts would be less-than-cumulatively considerable.

The analysis of Threshold c. shows that the Project site would not be subject to substantial noise associated with aircraft or airport operations. The Project has no air travel component, and therefore has no potential to result in cumulatively-considerable impacts associated with aircraft- or airport-related noise.

4.11.8 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a.: Significant Direct Impact. As shown in Table 4.11-13, the highest construction noise levels at the potentially impacted receiver locations are expected to approach 80.1 dBA L_{max} and would exceed the City of Lake Elsinore stationary construction equipment noise level standards for residential and semi-residential (school) uses during temporary Project construction activities at receiver locations R1 to R6 (refer to Figure 4.11-6); this represents a direct impact of the Project.



Off-site traffic-related noise impacts would be less than significant under each scenario evaluated in the Project's NIA and TIA.

Although CEQA does not require the analysis of the environment's impact on the proposed Project, the on-site traffic-related noise analysis indicates that residential dwelling units abutting Nichols Road would be exposed to exterior noise levels exceeding the limits specified by General Plan Policy 7.1 (i.e., exterior noise level limit of 60 dBA); this is evaluated as a significant direct impact due to a conflict with General Plan Policy 7.1. Additionally, although the Lake Elsinore General Plan does not specify exterior noise standards for hotel uses, the hotel may experience interior noise levels that exceed the limits specified by General Plan Policy 7.1 (i.e., 45 dBA interior noise level-limit). Additionally, residential buildings facing Nichols Road and I-15 and the proposed hotel use would experience interior noise levels that exceed the limits specified by General Plan Policy 7.1 (i.e., 45 dBA interior noise level limit).

Furthermore, Project operational noise levels affecting sensitive off-site receiver locations are expected to range from 42.6 to 47.3 dBA L_{50} ; as shown in Table 4.11-30, the operational noise levels associated with the proposed Project would exceed the nighttime exterior noise level standards established by General Plan Policy 7.1 (refer to Table 4.11-3) at receiver locations R1 to R3. This is evaluated as a significant impact of the proposed Project.

As previously shown on Table 4.11-31 and Table 4.11-32, the Project would contribute operational noise level increases over the existing ambient noise levels which ranging from 0.1 to 0.8 dBA L_{50} during the daytime hours and nighttime hours. Since the Project-related operational noise level contributions would satisfy the significance criteria discussed in subsection 4.11.4, the increases at the sensitive receiver locations would be less than significant.

Threshold b.: Significant Direct Impact. Table 4.11-33 shows the construction vibration levels in RMS are expected to approach 0.015 in/sec (RMS) at the nearby receiver locations. Based on the vibration threshold of 0.01 in/sec, the construction-related vibration impacts are considered potentially significant at receiver locations R2, R3, and R6. This is evaluated as a potentially significant impact prior to mitigation. No impacts due to ground borne vibration or noise would occur in association with long-term Project operations, as the Project would not generate a substantial number of heavy trucks, and vibration from any trucks visiting the site would not extend beyond the roadway right-of-way as all roadways on site would consist of smooth surfaces.

Threshold c.: No Impact. The closest airport is Skylark Field which is located approximately 5.7 miles southeast of the Project site. The Project site is not located within the AIA of the closest airport, Skylark Airport, and is not subject to substantial noise levels associated with airport operations. Further, the Project site is not located within an airport land use plan or within 2 miles of a public airport. The Project site would not be exposed to aircraft-related noise exceeding 55 dBA CNEL, which is considered "clearly acceptable" by the Riverside County ALUCP for residential and commercial development (ALUC, 2004, Table 2B). Accordingly, the Project would not result in the exposure of people residing or working at the Project site to excessive airport- or aircraft-related noise, and no impact would occur.



4.11.9 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

City Regulations and Design Standards

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

- Future residents and tenants of the proposed Project would be subject to applicable provisions of Chapter 11.176, *Noise Control*, of the Lake Elsinore Municipal Code, which was adopted to control unnecessary, excessive, and annoying noise and vibration in the City.

Mitigation

- MM 4.11-1 Prior to the issuance of grading permits affecting areas on site that are located within 700 feet of the existing residential uses located east of El Toro Road/Wood Mesa Court, and prior to issuance of building permits for Phase 1 of the proposed Project, the City of Lake Elsinore shall ensure that the grading plans and building plans (as appropriate) include the following notes. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.
- *“During construction activities that could expose nearby sensitive receptors (i.e., existing residential uses located along El Toro Road/Wood Mesa Court) to excessive construction-related noise, minimum 10-foot high temporary noise barriers shall be erected at the eastern limits of construction activities, as shown on Figure 4.11-8, Construction Noise Mitigation Measures, of the Nichols Ranch Specific Plan Environmental Impact Report (SCH No. 2018051051). Construction activities that could expose nearby sensitive receptors to excessive noise levels include any activities associated with the following construction phases that occur within the buffer distances described below:*
 - *Site preparation activities within 250 feet of the existing residential homes located along El Toro Road/Wood Mesa Court;*
 - *Mass and fine grading activities within 700 feet of the existing residential homes located along El Toro Road/Wood Mesa Court;*
 - *Building construction activities within 300 feet of the existing residential homes located along El Toro Road/Wood Mesa Court;*
 - *Paving activities within 500 feet of the existing residential homes located along El Toro Road/Wood Mesa Court; and*
 - *Architectural coating activities within 250 feet of the existing residential homes located along El Toro Road/Wood Mesa Court.*

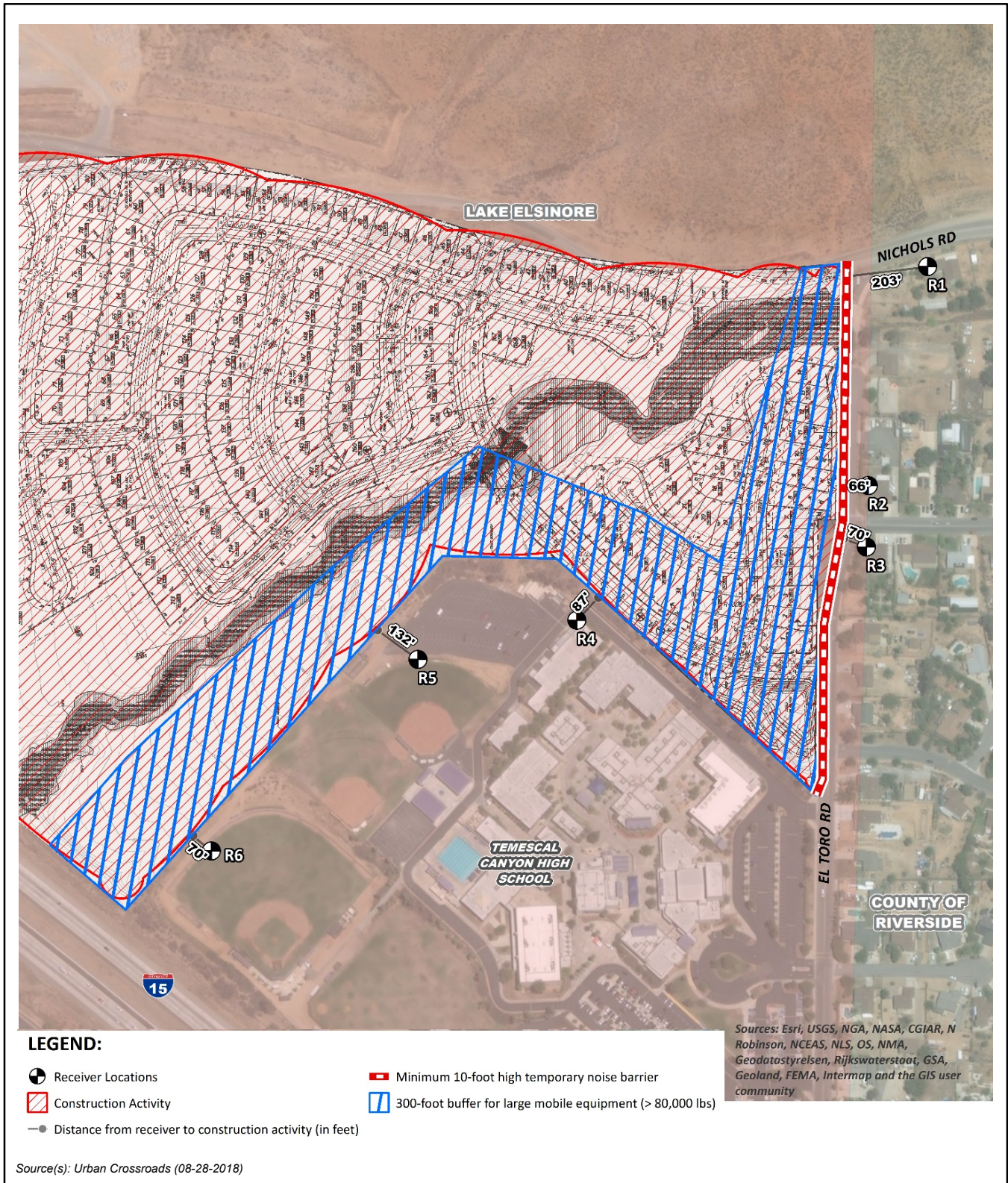


Figure 4.11-8



NOT TO SCALE



CONSRUCTION NOISE MITIGATION MEASURES



The noise control barriers shall remain in place during any construction activities for the above-described construction phases within the buffer distance shown. The noise control barriers shall have a solid face from top to bottom. The noise control barriers must meet the minimum height and be constructed as follows:

- *The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (per the Federal Highway Administration Noise Barrier Design Handbook). The noise barriers shall be constructed using an acoustical blanket (e.g., vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts;*
- *The noise barrier must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired; and*
- *The noise control barrier and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.*

MM 4.11-2 Prior to the issuance of grading or building permits affecting the portions of the site located south of Stovepipe Creek, the City of Lake Elsinore shall ensure that the grading or building plans include the following note. Project contractors shall be required to ensure compliance with the note and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.

- *During all phases of construction within on-site areas located south of Stovepipe Creek, large loaded trucks and mobile equipment greater than or equal to 80,000 pounds shall be prohibited. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used in these areas. As an exception, equipment heavier than 80,000 pounds may be utilized for the area shown on Figure 4.11-8, Construction Noise Mitigation Measures, of the Nichols Ranch Specific Plan Environmental Impact Report (SCH No. 2018051051) as being located at a distance greater than 300 feet from Sensitive Receiver Locations R1 through R6. In such a case, orange construction fencing shall be erected delineating those areas within 300 feet of Sensitive Receiver Locations R1 through R6 to ensure that equipment heavier than 80,000 pounds does not encroach into the required 300-foot buffer zone.*

MM 4.11-3 Prior to the issuance of any grading permits or building permits, the City of Lake Elsinore shall ensure that the grading plans and building plans include the following notes. Project contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Lake Elsinore staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.

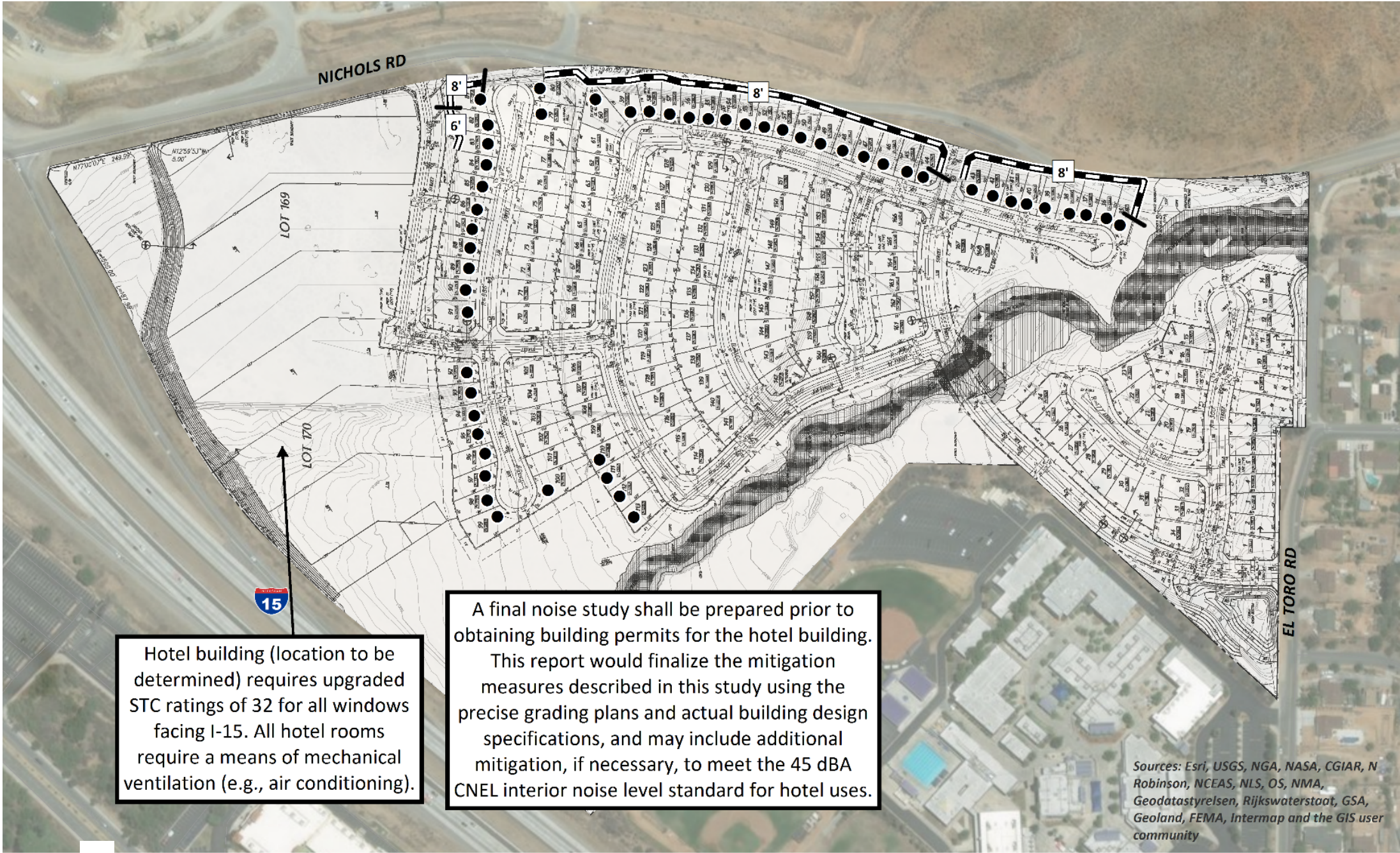


- *During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.*
- *The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receivers nearest the Project site.*
- *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 northwest or northern center) during all Project construction.*
- *The construction contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.*

MM 4.11-4 Prior to the issuance of occupancy permits for Lots 35 to 60 or Lots 80 to 83 of Tentative Tract Map No. 37305, the City of Lake Elsinore shall ensure that noise-attenuation barriers have been constructed in the locations and at the heights shown on Figure 4.11-9, *On-Site Traffic Noise Mitigation Measures*, of the Nichols Ranch Specific Plan Environmental Impact Report (SCH No. 2018051051). As shown on Figure 4.11-9, eight-foot tall noise-attenuation barriers shall be constructed along Nichols Road (i.e., at the northern lot lines of Lots 35 to 60 and Lots 80 to 81) and the western lot line of Lot 81, and six-foot tall noise-attenuation barriers shall be constructed at the western lot lines of Lots 82 and 83. The recommended noise control barriers shall be constructed so that the top of each wall and/or berm combination extends to the recommended height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the recommended height above the highest point between the residential home and the road. The barrier shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways, and a minimum transmission loss of 20 dBA. The noise barrier shall be constructed using the following materials:

- Masonry block;
- Stucco veneer over wood framing (or foam core), or 1-inch-thick tongue and groove wood of sufficient weight per square foot;
- Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot capable of providing a minimum transmission loss of 20 dBA;
- Earthen berm; or
- Any combination of these construction materials

The barrier shall consist of a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking.



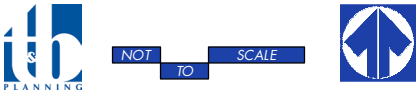
LEGEND:

8' Recommended Noise Barrier Height (in feet) Recommended Noise Barrier

● Lots requiring standard windows and glass doors with a minimum STC rating of 27 and a means of mechanical ventilation (e.g. air conditioning).

Source(s): Urban Crossroads (08-28-2018)

Figure 4.11-9



ON-SITE TRAFFIC NOISE MITIGATION MEASURES



- MM 4.11-5 Prior to the issuance of building permits for Lots 35 to 60, Lots 79 to 100, or Lots 110 to 113 of Tentative Tract Map No. 37305, and prior to issuance of building permits for the proposed hotel use, the City of Lake Elsinore shall ensure that the following noise abatement measures are included in the building plans:
- Windows & Glass Doors: All windows and/or glass doors shall be well-fitted, well weather-stripped assemblies and shall have a minimum, standard sound transmission class (STC) ratings as follows:
 - Minimum STC ratings of 27 for all windows and/or glass doors at residential lots 35 to 60, 79 to 100, and 110 to 113.
 - Minimum upgraded STC ratings of 32 for all hotel building windows and/or glass doors facing I-15.
 - Doors: All exterior doors shall be well weather-stripped and have minimum STC ratings of 27. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating.
 - 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.
 - Residential Roofs: Roof sheathing of wood construction shall be per manufacturer's specifications or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specifications 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 4.11-6 Prior to issuance of building permits for the proposed hotel use, a final noise study shall be prepared to finalize the mitigation measures identified in Mitigation Measure MM 4.11-5 using the precise grading plans and actual building design specifications, and shall include modified or supplemental mitigation, if necessary, to meet the City of Lake Elsinore 45 dBA CNEL interior noise level standard for hotel uses.
- MM 4.11-7 As a condition of the occupancy permit for the proposed gas station use, operating hours for the car wash shall be specified as permitted between 7:00 a.m. to 10:00 p.m. and prohibited between 10:00 p.m. to 7:00 a.m. Permanent, durable, weather-proof signs shall be posted at the gas station in the location of the car wash entry drive clearly indicating the car wash hours of operation as 7:00 a.m. to 10:00 p.m. The City of Lake Elsinore shall verify that the signs are posted prior to the issuance of the gas station occupancy permit. The City's Code Enforcement Division shall be responsible for enforcing the hours of operation.

4.11.10 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a: Less-than-Significant Impact with Mitigation Incorporated. Mitigation Measures MM 4.11-1 through MM 4.11-3 have been identified to reduce the Project's construction-related noise impacts at nearby sensitive receptors. The construction noise analysis presents a conservative approach with the highest noise-level-producing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearby sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location. With implementation of Mitigation Measures MM 4.11-1 through MM 4.11-3, and as shown on Figure 4.11-8, Table 4.11-34, *Mitigated Construction Equipment Noise Level Compliance*, shows the highest construction noise levels at the potentially impacted receiver locations would be reduced to a range from 59.2 to 66.9 dBA L_{max} with the attenuation provided by the temporary construction noise barriers and the 300-foot buffer for large construction equipment (i.e., equipment greater than or equal to 80,000 pounds). As shown on Table 4.11-34, the temporary construction noise mitigation measures would reduce the construction noise levels at the impacted receiver locations to satisfy the 60 dBA L_{max} residential and 70 dBA L_{max} semi-residential significance thresholds during temporary Project construction activities. Therefore, with implementation of the required mitigation, the Project's noise impact due to Project construction would be reduced to less-than-significant levels. The temporary construction noise barrier attenuation calculations are provided in Appendix 11.1 of the Project's NIA (*Technical Appendix J*). Appendix 11.2 of the Project's NIA includes example photographs of temporary noise barrier installations for reference. (Urban Crossroads, 2019, p. 102)

Table 4.11-34 Mitigated Construction Equipment Noise Level Compliance

Receiver Location ¹	Land Use Category	Unmitigated Construction Noise Levels (dBA L _{max}) ²	Large Mobile Equipment (> 80,000 lbs) Buffer Attenuation	Temporary Noise Barrier Attenuation	Mitigated Construction Noise Levels (dBA L _{max})	Threshold ³	Threshold Exceeded? ⁴
R1	Single-Family Residential	70.3	-3.4	-7.1	59.8	60	No
R2	Single-Family Residential	80.1	-13.2	-7.7	59.2	60	No
R3	Single-Family Residential	79.5	-12.6	-7.6	59.3	60	No
R4	Semi-Residential/Commercial	77.7	-10.8	0.0	66.9	70	No
R5	Semi-Residential/Commercial	74.0	-7.1	0.0	66.9	70	No
R5	Semi-Residential/Commercial	79.5	-12.6	0.0	66.9	70	No

1 Noise receiver locations are shown on Figure 4.11-6.

2 Estimated construction noise levels during peak operating conditions, as shown on Table 4.11-12.

3 Construction noise standards as shown on Table 4.11-6 for construction lasting greater than 10 days.

4 Do the estimated Project construction noise levels meet the construction noise level thresholds?

(Urban Crossroads, 2019, Table 11-9)

With the recommended noise barriers shown on Figure 4.11-9 and required by Mitigation Measure MM 4.11-4, the future on-site exterior noise levels would range from 54.8 to 59.9 dBA CNEL at the outdoor living areas of single-family residential homes, as previously shown on Table 4.11-23. As shown in Table 4.11-23, the



recommended noise barriers would ensure that the City of Lake Elsinore 60 dBA CNEL exterior noise level standards for residential land use is satisfied at all residential lots within the Project. The effective noise barrier height recommendations represent the minimum wall and/or berm combination height required to satisfy the City of Lake Elsinore exterior noise level standards. Thus, with implementation of Mitigation Measure MM 4.11-4, Project impacts due to exterior noise levels that exceed the City's standards would be reduced to less-than-significant levels.

As shown in Table 4.11-24 through Table 4.11-27, with standard windows and/or glass doors with a minimum sound transmission class (STC) rating of 27 (as required by Mitigation Measure MM 4.11-5), and with construction of the noise barriers required by Mitigation Measure MM 4.11-4, the interior noise levels for Lots 35 to 60, 79 to 100, and 110 to 113 of Tentative Tract Map No. 37305 would satisfy the City of Lake Elsinore 45 dBA CNEL interior noise level standard. Therefore, with implementation of the required mitigation, impacts due to residential interior noise levels that exceed the City's standards would be reduced to less-than-significant levels.

Hotel first through fourth floor windows would require upgraded STC ratings of 32 for all windows and/or glass doors facing I-15, as required by Mitigation Measure MM 4.11-5. The interior noise analysis shows that with the recommended interior noise mitigation measures, the Project would satisfy the City of Lake Elsinore 45dBA CNEL interior noise level standard. However, because precise building and site plans for the hotel use are not currently available, Mitigation Measure MM 4.11-6 has been imposed to require a final noise study that demonstrates that the hotel use would meet the City's interior noise standard of 45 dBA CNEL and/or that includes additional or modified mitigation to ensure the standard can be met. Accordingly, with implementation of the required mitigation, interior noise impacts associated with the proposed hotel use would be reduced to less-than-significant levels.

Implementation of Mitigation Measure MM 4.11-7 would prohibit nighttime operation of the car wash at the proposed gas station. Table 10-4 of the Project's NIA (*Technical Appendix J*) shows the mitigated Project operational noise levels would range from 25.5 to 38.6 dBA Leq without the car wash activities. Table 4.11-35, *Mitigated Operational Noise Level Compliance*, shows the mitigated operational noise levels associated with the Project would satisfy the exterior noise level standards at all nearby sensitive receiver locations with implementation of Mitigation Measure MM 4.11-7. Therefore, the Project's operational noise levels would not exceed City standards at nearby sensitive receptors following mitigation and the Project's impacts would therefore be reduced to less-than-significant levels.

Threshold b.: Less-than-Significant Impact with Mitigation Incorporated. Mitigation Measure MM 4.11-2 prohibits the use of construction equipment greater than or equal to 80,000 pounds within 300 feet of nearby sensitive receptor locations, and would serve to reduce the Project's vibration impacts affecting nearby sensitive receptors. As shown in Table 4.11-36, *Mitigated Construction Equipment Vibration Levels*, the mitigated vibration levels for loaded trucks and large mobile equipment would be reduced to approximately 0.002 in/sec RMS and would be reduced below the 0.01 in/sec RMS threshold at all receiver locations. Therefore, Project construction-related vibration levels would be reduced to less-than-significant levels with implementation of Mitigation Measure MM 4.11-2.

Table 4.11-35 Mitigated Operational Noise Level Compliance

Receiver Location ¹	Land Use	Mitigated Noise Level at Receiver Locations (dBA) ²					Threshold Exceeded? ³	
		L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (Anytime)		
							Daytime	Nighttime
Exterior Noise Level Standards	Single-Family Residential	50	55	60	65	70	-	-
		40	45	50	55	60	-	-
	Public Space/Commercial	60	65	70	75	80	-	-
		55	60	65	70	75	-	-
R1	SFR	28.1	30.4	33.0	35.6	42.2	No	No
R2	SFR	29.2	31.5	34.1	36.7	43.0	No	No
R3	SFR	25.5	27.8	30.0	32.3	41.1	No	No
R4	School	31.7	34.0	36.6	39.1	45.6	No	No
R5	School	34.1	36.4	39.0	41.5	47.7	No	No
R6	School	38.6	41.0	43.7	46.3	51.6	No	No

1 See Figure 4.11-7 for the receiver and noise source locations.

2 Estimated Project operational noise levels as shown on Table 4.11-29.

3 Do the Project operational noise levels satisfy the operational noise level standards (Table 4.11-3)?

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "SFR" = Single-Family Residential (Urban Crossroads, 2019, Table 10-5)

Table 4.11-36 Mitigated Construction Equipment Vibration Levels

Receiver Location ¹	Distance to Const. Activity (Feet)	Mitigated Receiver PPV Levels (in/sec) ²			Mitigated RMS Levels (in/sec) ³	Threshold (RMS)	Threshold Exceeded? ⁴
		Loaded Trucks	Large Bulldozer (>80k lbs)	Peak Vibration (PPV)			
R1	300'	0.002	0.002	0.002	0.002	0.01	No
R2	300'	0.002	0.002	0.002	0.002	0.01	No
R3	300'	0.002	0.002	0.002	0.002	0.01	No
R4	300'	0.002	0.002	0.002	0.002	0.01	No
R5	300'	0.002	0.002	0.002	0.002	0.01	No
R6	300'	0.002	0.002	0.002	0.002	0.01	No

1. Receiver locations are shown on Figure 4.11-6.

2. Based on the Vibration Source Levels of Construction Equipment included on Table 4.11-11.

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 peak vibration exceed the maximum acceptable vibration threshold shown on Table 4.11-7? (Urban Crossroads, 2019, Table 11-11)



4.12 PALEONTOLOGICAL RESOURCES

The analysis in this Subsection is based on a Project-specific Paleontological Resource and Monitoring Assessment Report titled “Paleontological Resource and Monitoring Assessment, Nichols Ranch Specific Plan Project, City of Lake Elsinore, Riverside County, California” (dated April 26, 2018). The report was prepared by Brian F. Smith and Associates, Inc. (BFSA) and is included as *Technical Appendix K* to this EIR.

4.12.1 EXISTING CONDITIONS

A. Existing Site Conditions

As shown on Figure 2-4 in Subsection 2.0, under existing conditions the Project site is mainly vacant. The northern 45.4 acres of the Project site are currently undergoing reclamation activities, pursuant to Amendment No. 2 to Reclamation Plan 2006-01 (Reclamation Plan 2006-01A2). Reclamation activities include grading and benching of slopes subject to mining, implementation of erosion control measures, and restoration of the site to a more natural appearance. Additionally, the Project site is traversed by Stovepipe Creek, which generally crosses the site in a northeast-to-southwest orientation.

The southern 27.1 acres of the Project site is mainly vacant and undeveloped. The southwest portion of the site contains Stovepipe Creek, which traverses the site in a northeast-to-southwest orientation.

B. Paleontological Setting

This section is based on a field study and a Paleontological Resource and Monitoring Assessment (PRMA) prepared by BFSA and provided as EIR *Technical Appendix K*. As described in the PRMA, the geology of the Project area is primarily underlain with young Quaternary (Holocene and late Pleistocene) sandy alluvial fan sediments. Protruding through the young sediments are two (2) hills, one of which is composed of Mesozoic phyllite (Mzp, a metamorphic rock) at the west end of the property, and the second, which is composed of undifferentiated Mesozoic low- to high-grade metasedimentary rocks (Mzu) near Nichols Road in the northeast part of the property. (BFSA, 2018b, p. 1)

C. Paleontological Sensitivity

As part of the Paleontological Resource and Monitoring Assessment, BFSA conducted a review of geologic reports and a paleontological sensitivity map. The paleontological sensitivity map obtained from the Riverside County Land Information System (RCLIS) ranked the entire Project site as having a “Low Potential/Sensitivity” to yield nonrenewable paleontological resources. Areas ranked as having a “Low” or “Undetermined” paleontological resource potential are required to undergo a paleontological evaluation (literature search, records check, field survey, and determination by a qualified paleontologist) before they are accepted as having a “Low potential for containing significant paleontological resources subject to adverse impacts,” and, therefore, are normally exempt from further mitigation. (BFSA, 2018b, p. 2)

D. Paleontological Survey

As part of the Paleontological Resource and Monitoring Assessment, BFSA conducted a field survey of the Project area in mid-February 2017. According to the survey, there were no surface-exposed fossils or



fossiliferous sedimentary units observed or encountered within the Project site. Holocene alluvial deposits in stream bottoms and along dry washes across the property are geologically too young to contain paleontological resources and are typically accorded a “Low Potential” for containing significant paleontological resources. Furthermore, two (2) museum collections and records searches of areas near the Project vicinity did not reveal any reported fossil localities or recorded fossiliferous sediments within several miles of the Project site. (BFSA, 2018b, p. 2)

4.12.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations related to paleontological resources.

A. Federal Regulations

1. *Paleontological Resources Preservation Act*

The Paleontological Resources Preservation Act (PRPA) was signed into law on March 30, 2009 (Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa – 470aaa-11). PRPA directs the Department of Agriculture (U.S. Forest Service) and the Department of the Interior (National Park Service, Bureau of Land Management, Bureau of Reclamation, and Fish and Wildlife Service) to implement comprehensive paleontological resource management programs. Section 6310 of PRPA specifically states, "As soon as practical after the date of enactment of this Act, the Secretary shall issue such regulations as are appropriate to carry out this subtitle, providing opportunities for public notice and comment." (NPS, 2017b)

B. State Regulations

1. *California Administrative Code, Title 14, Section 4308*

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: “No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value.”

2. *California Public Resources Code*

Public Resources Code § 5097.5 states that “A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.” Public Resources Code § 30244 states that, “Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.”

C. Local Regulations

1. *City of Lake Elsinore General Plan*

The City of Lake Elsinore General Plan, Chapter 4, *Resource Protection and Preservation*, addresses resource protection and preservation issues related to biological resources, open space, water resources, cultural and



paleontological resources, and aesthetics resources. Section 4.6.8, *Cultural and Paleontological Resource Goals, Policies, and Implementation Programs*, and Section 4.7.3, *Historical Preservation Goals, Policies and Implementation Programs*, details policies, implementation programs, and responsible agencies and departments in support of the following goals regarding cultural resources: (Lake Elsinore, 2011a)

- Goal 6: Preserve, protect, and promote the cultural heritage of the City and surrounding region for the education and enjoyment of all City residents and visitors, as well as for the advancement of historical and archaeological knowledge.
- Goal 7: Support state-of-the-art research designs and analytical approaches to archaeological and cultural resource investigations while also acknowledging the traditional knowledge and experience of the Native American tribes regarding Native American culture.
- Goal 9: Assure the recognition of the City's heritage through preservation of the City's significant historical sites and structures.
- Goal 10: Encourage the preservation, protection, and restoration of historical and cultural resources.

4.12.3 BASIS OF DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to paleontological resources if the Project or any Project-related component would:

- a. *Directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature.*

The above-listed threshold is derived directly from Section VII of Appendix G to the CEQA Guidelines and addresses typical adverse effects to paleontological resources (OPR, 2018).

4.12.4 IMPACT ANALYSIS

Threshold a: *Would the Project directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature?*

According to the Riverside County Land Information System, the Project site has "Low Potential" to yield nonrenewable paleontological resources. A field survey conducted by BFSa did not identify any fossils or sedimentary rock types that might have yielded any fossiliferous remains. In addition, based on the metamorphic and late Quaternary young alluvial fan sediments across the entire Project site, there is a minimal likelihood that any fossiliferous deposits would be present within the Project site. Based on the foregoing, the Project would not directly nor indirectly destroy a unique paleontological resource, or site, or unique geologic feature; therefore, impacts would be less than significant.

4.12.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site.



As discussed above under Threshold a., the proposed Project has “Low Potential” to impact paleontological resources that may be buried beneath the ground surface of the Project site. The Project site is underlain with metamorphic and late Quaternary young alluvial fan sediments across the entire site, which indicates a low likelihood that fossiliferous deposits of any sort would be present within the Project site and its surrounding areas. Thus, the Project would not result in a cumulatively-considerable impact to paleontological resources, and impacts would be less than significant.

4.12.6 SIGNIFICANCE OF IMPACT BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The Project site has a “Low Potential” to yield nonrenewable paleontological resources. There were no surface-exposed fossils or fossiliferous sedimentary units found during the field survey conducted by BFSa. In addition, the metamorphic and late Quaternary young alluvial fan sediments across the entire Project site indicates a low likelihood that any fossiliferous deposit would be present within the Project area and its surrounding areas. Thus, the Project would not impact any known paleontological resource or unique geological feature. Impacts would be less than significant.

4.12.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Impacts would be less than significant; therefore, mitigation is not required.



4.13 POPULATION AND HOUSING

The following analysis discloses existing population and housing data from for the City of Lake Elsinore and assesses the potential for impacts on population and housing associated with implementation of the Project. The analysis in this Subsection is based on information contained in the City of Lake Elsinore General Plan (Lake Elsinore, 2011a).

4.13.1 EXISTING CONDITIONS

The Project site consists of undeveloped land and does not contain previously built residential or commercial structures. Currently, the Project site does not contain or support a population. The northern portion of the Project site is undergoing reclamation and has employees; however, these employees would cease work on-site following reclamation pursuant to Reclamation Plan No. 2006-01A2. As previously depicted on Figure 2-4, *Aerial Photograph*, the site is bound by a mixture of existing residential developments, commercial uses, a school, an active mining operation, undeveloped land, and open space.

A. Population Projections

The Project site is located within the City of Lake Elsinore in the County of Riverside. According to the City of Lake Elsinore General Plan Housing Element, in the year 2010, the City of Lake Elsinore housed a total population of approximately 51,138 persons. This value reflected an increase of 77% from the recorded population in the year 2000. The City of Lake Elsinore Housing Element estimates that by year 2020, the population of the City of Lake Elsinore will increase to approximately 36% from the year 2010. (Lake Elsinore, 2013, pp. 6-7)

The projected population for the year 2035 for the City of Lake Elsinore is estimated to be 92,438 persons, representing an increase of approximately 81% as compared to the year 2010. Refer to Table 4.13-1, *Lake Elsinore Regional Growth Forecast*, for a depiction of population increases in the City of Lake Elsinore.

Table 4.13-1 Lake Elsinore Regional Growth Forecast

	2000	2005	2010	2015	2020	2025	2030	2035
Population	28,928	39,856	51,138	61,045	69,558	78,044	85,376	92,438
Housing	9,505	12,716	16,429	19,566	22,792	25,922	28,704	31,117
Jobs	N/A*	10,508	12,152	13,525	15,006	16,487	18,012	19,297

*Value not included in reference source.
(WRCOG, 2008)

4.13.2 APPLICABLE ENVIRONMENTAL REGULATIONS

A. City of Lake Elsinore Housing Element

The City of Elsinore General Plan No. 2011-071 includes a Housing Element, which identifies and establishes the City's policies with respect to meeting the needs of existing and future residents in the City of Lake Elsinore. The Housing Element contains policies designed to meet the housing needs of the City based on current and projected statistics. State law requires that each jurisdiction evaluate its Housing Element every



five years to determine its effectiveness in achieving City and State goals and objectives, and to adopt an updated Housing Element that reflects the results of this evaluation.

B. SCAG Regional Comprehensive Plan

The Southern California Association of Governments (SCAG) is a joint powers authority (JPA) under California state law, established as an association of local governments and agencies that convene as a forum to address regional issues. In 2008, SCAG released the Regional Comprehensive Plan (RCP) which created advisory plan that addressed important regional issues like housing, traffic/transportation, water, and air quality. The RCP serves as an advisory document to local agencies in southern California to aid in the preparation of local plans and handling local issues of regional significance.

C. SCAG Regional Transportation Plan/Sustainable Communities Strategy

In April 2016, SCAG released the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to create a plan for defining and solving regional problems including housing, traffic, water, air quality, and other regional challenges. The RTP/SCS builds upon the elements of existing local general plans and provides a blueprint for where and how the Southern California area will grow.

4.13.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to population and housing if the Project or any Project-related component would:

- a. 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); or*
- b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.*

The above listed thresholds are derived directly from Section XIV of Appendix G to the CEQA Guidelines and address typical adverse effects to population and housing (OPR, 2018).

4.13.4 IMPACT ANALYSIS

Threshold a: *Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

As with any residential development, the construction of new homes is considered a pull-factor or lure for new homeowners from outside the area, thereby having the potential to directly induce growth. The northern 45.4 acres of the Project site are designated by the Alberhill Ranch Specific Plan for “Commercial – Specific Plan” land uses, while the southern portions of the site are designated by the City’s General Plan for “General Commercial” land uses. The Project proposes to change the Project site’s existing land use designations to allow for the development of 168 single-family homes, 14.5 acres of commercial retail uses, open space, and



recreational uses. Under existing General Plan land use designations, the Project site would not be expected to generate a residential population and would be expected to generate approximately 1,594 employees within the City ($72.5 \text{ acres} \times 21.98 \text{ employees per acre} = 1,594 \text{ employees}$) (SCAG, 2001, Table 2A). Implementation of the proposed Project would result in a future population of approximately 628 residents ($168 \text{ dwelling units} \times 3.74 \text{ persons per household} = 628 \text{ future residents}$) and approximately 319 employees ($14.5 \text{ acres} \times 21.98 \text{ jobs per acre} = 319 \text{ jobs}$) (SCAG, 2001, Table 2A; USCB, 2016).

At the time the General Plan EIR was certified in 2011, the northern 45.4 acres of the Project site were located in within the City of Lake Elsinore, while the southern 27.1 acres were located within Riverside County. The southern 27.1 acres of the Project site was annexed into the City of Lake Elsinore on November 10, 2016 (Annexation No. 83) (RLAFCO, 2016). Thus, the projected employment increases on the southern 27.1 acres of the Project site were not included as part of the City of Lake Elsinore General Plan's estimates. Thus, the Project would result in 679 fewer employees than was evaluated in the City of Lake Elsinore General Plan EIR for the Project site, only including the northern 45.4 acres of the Project site. The Project would result in an additional 628 residents than was anticipated by the maximum buildout scenario evaluated in the City of Lake Elsinore General Plan EIR for the entire Project site, including the northern 45.4 acres and the southern 27.1 acres, because residential uses were not evaluated for the northern or southern portions of the Project site. The proposed Project would result in an increase in population growth and a reduction in jobs as compared to what is already anticipated and approved for on-site. The addition of 628 residents under the proposed Project would result in a 0.98% population increase within the City of Lake Elsinore ($628 / 64,205 \text{ residents [in 2016]} \times 100 = 0.98$). (USCB, 2016)

The proposed Project would not result in substantial population growth to the area. The expected population is 628 persons greater than was anticipated on the property by the current City of Lake Elsinore General Plan. However, as noted above, the increase of 628 residents on the Project site represents a minor increase of 0.98% population increase within Lake Elsinore. Thus, although the projected population of the proposed Project is greater than the City's population projections, population growth on-site would not be substantial within the overall scale of Lake Elsinore or surrounding areas. The increase in population associated with the proposed Project has been addressed under the relevant issue areas identified throughout this EIR (e.g., public services, recreation, transportation and traffic, etc.). Under each of these topics, Project-related impacts are determined to be less than significant, or mitigation measures have been imposed to reduce impacts to the maximum feasible extent. There are no components of the proposed population increase that have not already been addressed and accounted for throughout this EIR for the Project site. Therefore, the proposed Project would not directly or indirectly induce substantial unplanned population growth in the area or otherwise result in growth that would result in significant adverse environmental effects not already addressed throughout this EIR. Thus, a less-than-significant impact would occur.

Threshold b: Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project site is vacant and undeveloped under existing conditions and does not contain any existing housing or residents. Therefore, implementation of the proposed Project would not result in the displacement of substantial amount of existing people or housing and would not result in the need for construction of replacement housing elsewhere. Moreover, the Project involves the construction of 168 residential homes on-



site that would further augment the housing supply in the region. Thus, no impact associated with housing displacement would occur.

4.13.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site, including build-out of the City of Lake Elsinore General Plan Land Use Plan.

Build-out of the Project site is expected to generate a resident population that is greater than the City of Lake Elsinore General Plan's expected population projections. However, impacts associated with the Project's proposed increases in population on-site have been evaluated throughout this EIR, and mitigation measures have been imposed where necessary to reduce impacts to the maximum feasible extent. Therefore, implementation of the Project would not result in cumulatively-considerable impacts to the region.

As noted under the discussion of Threshold b, the Project site is vacant and undeveloped and would not result in the displacement of a substantial amount of existing residents or housing. Therefore, implementation of the Project would not require the need for construction of replacement housing elsewhere and would not result in cumulatively-considerable impacts due to the displacement of people or housing that could necessitate the construction of replacement housing.

4.13.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. Implementation of the Project would exceed local and regional projections. However, impacts associated with the Project's proposed increases in population on-site have been evaluated throughout this EIR, and mitigation measures have been imposed where necessary to reduce impacts to the maximum feasible extent. Therefore, Project impacts due to direct and indirect population growth would be less than significant.

Threshold b: No Impact. The Project would not result in the displacement of people or housing that could result in or require the construction of replacement housing; rather, the Project's development of 168 residential units would further augment the housing supply in the region. Thus, no impact associated with inducing housing demand would occur.

4.13.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Impacts to Population and Housing as a result of Project implementation would be less than significant and mitigation is not required.



4.14 PUBLIC SERVICES

This Subsection provides information on existing public services and service levels for fire protection, police protection, schools, parks, libraries, and other public facilities, and evaluates impacts to the environment that may result from the demand the Project may have on such services. The information is based on a variety of source material including the City of Lake Elsinore General Plan and communications with public service agency personnel. Service letters were requested from the Lake Elsinore Unified School District (LEUSD), Riverside County Fire Department (RCFD), Riverside County Sheriff's Department (RCSD), the Riverside County Library System (RCPLS), and the Riverside County Department of Waste Resources (RCDWR). Copies of correspondence with these agencies are provided in *Technical Appendix M* to this EIR.

4.14.1 EXISTING CONDITIONS

A. Fire Protection/Emergency Medical Services

Fire protection services for the Project site are provided by the Riverside County Fire Department (RCFD). The RCFD provides a full range of fire services within the County and contracting cities. The level of service provided is dependent on response times, travel distance, and staffing workload levels established in the Riverside County Fire Protection and Emergency Medical Aid Plan. The Fire Protection Master Plan contains four fire response categories that are used to determine the response times/travel distances for primary and secondary fire stations. The response categories are based on the amount of community build-out presumed in the Master Fire Plan. The Fire Department assumes in any given region that three or more fire engines respond to any reported fire.

The fire station that would serve the Project is Station 97 (Rosetta Canyon), which is located at 41725 Rosetta Canyon Drive, Lake Elsinore, CA 92532. The Rosetta Canyon Fire Station is approximately 3.0 roadway miles from the Project site. The fire station that could serve the Project site is staffed full time, 24 hours per day, 7 days per week, with a minimum four-person crew, including paramedics. The Project site is located in a Local Response Area (LRA) Very High Fire Hazard Severity Zone of Riverside County. (RCFD, 2018; Google Earth, 2018)

B. Sheriff Services

The City of Lake Elsinore contracts for police protection with the Riverside County Sheriff's Department (RCSD). The Sheriff Station serving the Project area is the Lake Elsinore Police Station, located at 333 W. Limited Avenue, Lake Elsinore, CA 92530. The Lake Elsinore Police Station is approximately 4.1 roadway miles southeast of the Project site (Google Earth, 2018). The City units are assigned any of six (6) city beats, 90-95, and deploy from the Lake Elsinore Station daily. The proposed Project is located within city zone 95. In addition to community policing, other services provided by the Police Department include, but are not limited to, operating of the emergency 911 system and non-emergency phones via the Dispatch Center, operating lake patrol, performing traffic control, and providing crime prevention education. Also, the City of Lake Elsinore and the Lake Elsinore Police Department support the Crime Free Multi-Housing (CFMH) Program, which is a combined effort of law enforcement, property owners/managers, and tenants with a common interest of reducing crime and promoting a safer quality of life. (RCSD, 2018)



The City of Lake Elsinore has set a minimum standard of 0.85 officers per 1,000 residents during fiscal year 2010-2011. The Police Department has indicated that their desired staffing level is 1.0 officer per 1,000 residents. At present, the Lake Elsinore Police Station staffing levels are sufficient to serve the area under existing conditions. Average response times for the Lake Elsinore Police Station in the Project area from the year 2017 are shown in Table 4.14-1, *Lake Elsinore Police Station Response Times*. Emergency calls involving life-threatening events take priority assignment. (RCSD, 2018)

Table 4.14-1 Lake Elsinore Police Station Response Times

PRIORITY LEVEL	AVERAGE RESPONSE TIME
Priority 1	5.23 minutes
Priority 2	11.33 minutes
Priority 3	17.7 minutes
Priority 4	21.73 minutes

(RCSD, 2018)

C. Schools

The Project site is located in the Lake Elsinore Unified School District (LEUSD) for elementary through high school services. The Project site is currently within the attendance boundary of the Elsinore Elementary School, located at 512 W. Summer School, Lake Elsinore, CA 92530; Elsinore Middle School, located at 1203 W. Graham Avenue, Lake Elsinore, CA 92530; and Temescal Canyon High School, located at 28755 El Toro Road, Lake Elsinore, CA 92532 (LEUSD, 2018). According to information provided by LEUSD, as of 2018, the above-listed schools that would serve the Project do not guarantee accepting new students due to increasing enrollment.

D. Parks

The City of Lake Elsinore's Parks and Recreation Master Plan established the standard of five acres of usable park land per 1,000 population (Lake Elsinore, 2011b, p. 3.15-18). For a more detailed discussion regarding parks and recreational facilities in the region, refer to EIR Subsection 4.14, *Recreation*.

E. Other Public Facilities

The Project site is located within the City of Lake Elsinore, which contains its own library facilities within the Riverside County Public Library System (RCPLS). The City of Lake Elsinore library facilities contains a total of 17,500 square feet of library space with approximately 66,686 volumes of material. A total of 12 persons are employed by the City of Lake Elsinore library facilities. The Project area is serviced by two (2) libraries within the City, including, Lakeside Library, located approximately 4.2 roadway miles to the southwest of the Project site at 32593 Riverside Drive, Lake Elsinore, CA 92530; and Lake Elsinore Library, located approximately 4.1 roadway mile to the southwest of the Project site at 600 W. Graham Avenue, Lake Elsinore, CA 92530. (RCPLS, 2018)



4.14.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, State, and local environmental laws and related regulations related to public services.

A. State Regulations

1. Fire Protection Services Regulations and Plans

Public Resources Code (PRC) Sections 4290-4299

This portion of the Public Resources Code (PRC) requires minimum statewide fire safety standards pertaining to: road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts. With certain exceptions, all new construction in potential wildland fire areas is required to meet the statewide standards. State requirements, however, do not supersede more restrictive local regulations.

PRC Sections 4102-4127 - State Responsibility Areas (SRAs)

PRC Section 4102 specifies that “‘State responsibility areas’ means areas of the state in which the financial responsibility of preventing and suppressing fires has been determined by the [State Fire] Board pursuant to Section 4125, to be primarily the responsibility of the state.” These areas may contain state or privately-owned forest, watershed, and rangeland. §§ 4126-4127 of the PRC further specify the standards that define what does and does not constitute an SRA.

California Code of Regulations (CCR) Title 24, Parts 2 and 9 – Fire Codes

Part 2 of Title 24 of the CCR refers to the California Building Code which contains complete regulations and general construction building standards of State of California adopting agencies, including administrative, fire and life safety and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains other fire safety-related building standards. In particular, Chapter 7A, “Materials and Construction Methods for Exterior Wildfire Exposure,” in the 2010 California Building Code addresses fire safety standards for new construction and Section 701A.3.2 addresses “New Buildings Located in Any Fire Hazard Severity Zone.”

CCR Title 14 – Natural Resources

These regulations constitute the basic wildland fire protection standards of the California Board of Forestry. They were prepared and adopted to establish minimum wildfire protection standards in conjunction with building, construction, and development within SRAs. Among other things, Title 14 requires the design and construction of structures, subdivisions, and developments in an SRA provide for basic emergency access and perimeter wildfire protection measures (fire fuel modification zones, etc.).



California Government Code (CGC) Sections 51178-51179 – Very High Fire Hazard Severity Zones

Section 51178 specifies that the Director of CalFire, in cooperation with local fire authorities, must identify areas that are Very High Fire Hazard Severity Zones (VHFHSZs) in Local Responsibility Areas (LRAs), based on consistent statewide criteria and the expected severity of fire hazard. It further specifies that VHFHSZs “shall be based on fuel loading, slope, fire weather and other relevant factors,” including areas subject to Santa Ana winds which are a “major cause of wildfire spread.” Section 51179 states that a local agency (such as a county) must also designate (and map) the VHFHSZs in its jurisdiction by ordinance. (See the discussion on Ordinance No. 787, below, regarding Riverside County’s VHFHSZs). Other portions of the Government Code outline when a local agency may use its discretion to exclude areas from VHFHSZ requirements or add areas not designated by the State of California to its VHFHSZ areas.

CGC Section 51182 – Defensible Space

Pursuant to this code, a person who “owns, leases, controls, operates or maintains an occupied dwelling or occupied structure in, upon or adjoining a mountainous area, forest-covered land, brush-covered land, grass-covered land or land that is covered with flammable material” in a very high fire hazard severity zone designated by the local agency pursuant to § 51179, shall at all times maintain a specified amount of “defensible space” to protect structures in high fire hazard areas.

PRC Section 4213 - Fire Prevention Fees

Pursuant to PRC Section 4213, in July of 2011, the State of California began assessing an annual “Fire Prevention Fee” for all habitable structures within the State’s Responsibility Area (SRA) to pay for fire prevention services. The SRA is the portion of the state where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within incorporated city boundaries, Tribal or federally owned land. As of 2013, the fee is up to \$150 per habitable structure (i.e., a building that can be occupied for residential use, which does not include incidental buildings such as detached garages, barns, outdoor bathrooms, sheds, etc.).

2. School Services Regulations and Plans

Assembly Bill (AB) 16

In 2002, AB 16 created the Critically Overcrowded School Facilities program, which supplements the new construction provisions within the School Facilities Program (SFP). The SFP provides State of California funding assistance for new facility construction projects and modernization projects. The Critically Overcrowded School Facilities program allows school districts with critically overcrowded school facilities, as determined by the California Department of Education (CDE), to apply for new construction projects in advance of meeting all SFP new construction program requirements. Districts with SFP new construction eligibility and school sites included on a CDE list of source schools may apply.

Leroy F. Greene School Facilities Act of 1998 (Senate Bill [SB] 50)

Senate Bill 50 (SB 50) was enacted by the State Legislature in 1998, which amended existing state law governing school fees. In particular, SB 50 amended prior California Government Code (CGC) Section



65995(a) to prohibit state or local agencies from imposing school impact mitigation fees, dedications, or other requirements in excess of those provided in the statute in connection with “any legislative or adjudicative act...by any state or local agency involving...the planning, use, or development of real property....”

The legislation also amended CGC Section 65996(b) to prohibit local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any “legislative or adjudicative act [involving] the planning, use or development of real property.” Further, SB 50 established the base amount of allowable developer fees: \$1.93 per square foot for residential construction and \$0.31 per square foot for commercial. These base amounts are commonly called “Level 1 fees” and are the same caps that were in place at the time SB 50 was enacted. Level 1 fees are subject to inflation adjustment every two years.

In certain circumstances, for residential construction, school districts can impose fees that are higher than Level 1 fees. School districts can impose Level 2 fees, which are equal to 50% of land and construction costs if they: (1) prepare and adopt a school needs analysis for facilities; (2) are determined by the State Allocation Board to be eligible to impose these fees; and (3) meet at least two of the following four conditions:

- At least 30% of the district’s students are on a multi-track year-round schedule.
- The district has placed on the ballot within the previous four years a local school bond that received at least 50% of the votes cast.
- The district has passed bonds equal to 30% of its bonding capacity.
- Or, at least 20% of the district’s teaching stations are relocatable classrooms.

Additionally, if the State of California’s bond funds are exhausted, a school district that is eligible to impose Level 2 fees is authorized to impose even higher fees. Commonly referred to as “Level 3 fees,” these fees are equal to 100% of land and construction costs of new schools required as a result of new developments.

B. Local Regulations

❑ Riverside County Fire Department Fire Protection and Emergency Medical Services Strategic Master Plan

The County of Riverside has developed this plan to proactively plan facility, service, and equipment needs for fire protection. It also incorporates the CDF Management Plan for several sub-zones within Riverside County. Implementation of this plan helps reduce potential risks of fire for residents in areas of moderate to high fire danger. (Riverside County, 2015, p. 4.13-95)

❑ City of Lake Elsinore Municipal Code - § 16.34.060

The City of Lake Elsinore Municipal Code § 16.34.060 requires that prior to the issuance of a building permit, the applicant pay fees for the purposes set forth in that section, including the City’s Library Mitigation Fee. Future construction of library improvements shall be paid to the City of Lake Elsinore at the time of building permit issuance to assure the necessary standards. (Lake Elsinore, 2018)



□ Lake Elsinore Municipal Code (LEMC) – Title 16, Chapter 16.74

The purpose and intent of Chapter 16.74 of the City of Lake Elsinore Municipal Code is to establish a “program for the adoption and administration of development impact fees by the City for the benefit of the citizens whereby as a condition to the issuance of a building permit or certificate of occupancy by the City the property owner or land developer will be required to pay development impact fees or provide other consideration to the City for the purpose of defraying the costs of public expenditures for capital improvements (and operational services to the extent allowed by law) which will benefit such new development” (Section 16.74.010). This chapter establishes an “Animal shelter facilities fee” (Section 16.74.048) to mitigate the additional burdens created by new development for animal facilities and a “Fire facilities fee” (16.74.049) to mitigate the additional burdens created by new development for City fire facilities. (Lake Elsinore, 2011b, p. 3.14-12)

□ City of Lake Elsinore General Plan

The City of Lake Elsinore General Plan Chapter 3.0, *Public Safety and Welfare*, provides goals and policies to promote community welfare and to enhance the overall wellbeing of the City’s residents and visitors through responsive city government, efficient and timely emergency response, academic excellence, which includes access to quality school and library facilities for all residents, and effective and efficient delivery of services and utilities. (Lake Elsinore, 2011a, p. 3-33)

□ Lake Elsinore Municipal Code (LEMC) – Title 16, Chapter 16.12 and Chapter 16.34

Title 16 of the Lake Elsinore Municipal Code sets for rules, regulations and specifications to control the division of land within the City. Through Section 16.12.060, the City Council reserves the right to set aside portions of a proposed land division for public schools and other public buildings, other than park and recreational facilities, that will be required for the population which is intended to occupy the land division under the plan of proposed property uses therein and for the general public. (Lake Elsinore, 2011b, p. 3.14-12)

Section 16.34.060 in Chapter 16.34 (Required Improvements) requires that prior to the issuance of a building permit, the applicant pay fees for the purposes set forth in that section. Paragraph B of Section 16.34.060 describes the City’s Library Mitigation Fee and states that “Upon the recommendation of the Community Services Director and the concurrence of the City Manager, an in-lieu fee for future construction of library improvements shall be paid to the City of Lake Elsinore to assure the necessary library facilities are provided the community. Such facilities are to meet the Riverside City/County Library standards. An in-lieu fee as established by resolution shall be paid to the City at the time of building permit issuance. That amount shall be determined by the Community Services Director and transmitted to the Community Development Department for collection.” (Lake Elsinore, 2011b, p. 3.14-12)

4.14.3 BASIS FOR DETERMINING SIGNIFICANCE

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:



- a. Fire Protection;
- b. Police Protection;
- c. Schools;
- d. Parks;
- e. Other public facilities.

The above listed thresholds are derived directly from Section XV of Appendix G to the CEQA Guidelines and address typical adverse effects to public services (OPR, 2018).

4.14.4 IMPACT ANALYSIS

Threshold a: 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 Protection Services?

The Project's proposal to develop 168 single-family residential homes, recreational areas, and open space would place additional demand on the RCFD, which provides fire protection services to the City of Lake Elsinore. Implementation of the Project would cumulatively affect the Department's ability to service the planned population. The Project would require an "Urban-Category II" level of service as defined by the Riverside County Fire Protection Master Plan. This classification requires a fire station be within three roadway miles of the Project site, and a full first alarm assignment team operating on the scene within 15 minutes of dispatch. The primary station serving the Project area (Station 97, Rosetta Canyon Fire) is located approximately 3.0 roadway miles from the Project site (Google Earth, 2018). Based on the travel distance between the Project site and Station 97, the first unit should arrive at the proposed Project site within approximately six and a half minutes after dispatch. The estimated response time is approximate but demonstrates that the RCFD would be able to meet the Urban-Category II Land Use protection goals of the Fire Protection Master Plan for the Project.

As a condition of Project approval, the proposed Project would be required to conform to all mandatory local, State, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard Riverside County Fire Department conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the Project.

As indicated above under Subsection 4.14.1, the Project site is located in the Local Responsibility Area "Very High Fire Hazard Severity Zone." As a condition of Project approval, the Project also would be required to conform to the special construction provisions contained in City of Lake Elsinore Municipal Code Section 15.56.020(P), Title 14, the California Building Code, California Fire Code, and Riverside County Fire



Department Information Bulletin #08-05 Fuel Modification Standard. As part of the Project's conditions of approval, plans would be required to be submitted for the Fire Department for review and approval prior to building permit issuance in order to demonstrate compliance with the applicable construction provisions. (RCFD, 2018; Lake Elsinore, 2018)

Furthermore, the Project would be required to implement the Project's Fire Protection Plan (FPP), which was prepared for the Project site by FIREWISE 2000, Inc. and is included as EIR *Technical Appendix G*. Compliance with the requirements of the FPP, as required by the Nichols Ranch Specific Plan, would reduce impacts due to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires, and would therefore reduce the site's long-term demand for fire protection services.

Nonetheless, development of the proposed Project would impact fire services by placing an additional demand on existing County Fire Department resources and personnel. In accordance with the Riverside County Fire Protection Master Plan, a new fire station and/or appropriate fire company is required for the development of 2,000 dwelling units or more. The Project proposes the development of 168 dwelling units and recreational areas, and open space; therefore, the proposed Project would not directly result in the need for any new fire stations. However, the proposed Project would impact the fire department's ability to provide an adequate level of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. The Project is required to adhere to City of Lake Elsinore Municipal Code § 16.74.049, which requires payment of a DIF to assist the City in providing for fire protection facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction. Accordingly, Project-related impacts to fire protection services are evaluated as less than significant and no mitigation beyond payment of DIF fees would be required.

Threshold b: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered 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 Police Protection?

The Project would result in an approximate population increase of 668 residents and approximately 319 employees. The incremental increase in population and jobs to the region could result in an incremental increase in criminal activity such as burglaries, thefts, auto thefts, vandalism, etc. However, according to the RCSD, there is not a direct correlation between population growth, the number of crimes committed, and the number of RCSD personnel needed to respond to these increases. As the population and use of an area increases, however, additional financing of equipment and manpower needs are required to meet the increased demand. The proposed Project would result in an increase in the cumulative demand for services from the RCSD, which provides police protection services to the Project site.

Riverside County has set a minimum standard of 1 deputy per 1,000 people. This standard was adopted as part of the "Commitment to Public Safety and Citizens' Option for Public Safety," by the Board of Supervisors on September 17, 1996. The Sheriff's Department has indicated that their desired staffing level is 1.2 deputies



per 1,000 people. Additionally, Mitigation Measure 4.15.C of EIR No. 441 states that Riverside County shall meet and maintain a goal of 1.5 sworn peace officers per 1,000 population.

In order to maintain the desirable level of service established by EIR No. 441 Mitigation Measure 4.15.C, build-out of the proposed Project would generate a need for approximately one (1) additional sworn peace officer (668 total residents \times 1.5 sworn peace officers/1,000 persons = 1.0 sworn peace officer). Staff necessary to support the additional deputy would include an appropriate level of civilian, investigation, and supervisory personnel. The proposed Project would not, however, in and of itself result in the need for new or expanded sheriff facilities. (RCSD, 2018)

The Project would be required to comply with the City of Lake Elsinore Municipal Code, which requires a development impact fee (DIF) payment to the City for impacts to public services and facilities, including sheriff facilities and services. Payment of the DIF fee would ensure that funds are available for either the purchase of new equipment and/or the hiring of additional sheriff personnel to maintain the County's desired level of service for sheriff protection.

In addition, implementation of a Crime-Free Multi-Housing Program between the Project's Home Owner Association and the Sheriff's Department, as would occur through the City's implementation of its General Plan, would further reduce impacts on sheriff resources.

Therefore, implementation of the Project would not result in the need for new or expanded sheriff facilities, and impacts would be less than significant. The Project's incremental demand for sheriff protection services also would be less than significant because the Project would be required to contribute DIF fees. Accordingly, a less-than-significant impact would occur with respect to sheriff protection services or facilities as a result of implementation of the proposed Project.

Threshold c: 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 School Services?

The construction of 168 dwelling units as planned under the proposed Project would increase the population in the City of Lake Elsinore and would consequently place greater demand on the existing public-school system by generating additional students to be served by the LEUSD. The LEUSD have established a student generation rate for each school type, which are depicted in Table 4.14-2, *Project-Related Student-Generation*. As indicated in Table 4.14-2, the Project's proposed 168 dwelling units would result in the annual generation of approximately 44 elementary school students (grades K-5), 22 middle school students (grades 6-8), and 29 high school students (grades 9-12). (LEUSD, 2018)



Table 4.14-2 Project-Related Student-Generation

DISTRICT	SCHOOL TYPE	GRADES SERVED	STUDENT GENERATION RATE	DWELLING UNITS	NO. OF PROJECT-GENERATED STUDENTS
LEUSD	Elementary School	K-5	0.2644	168	44
	Middle School	6-8	0.1315	168	22
	High School	9-12	0.1743	168	29
Total Number of Students Generated by the Project					95

(LEUSD, 2018)

Correspondence with LEUSD has indicated that the elementary, middle, and high schools that would most likely serve the Project cannot guarantee the new students generated from the Project would be able to attend due to increasing enrollment. Thus, the estimated annual number of students generated by the Project as presented in Table 4.14-2 may not be able to be accommodated by existing facilities (LEUSD, 2018). New school facilities may be needed to either serve future students generated by the Project, or to shift attendance boundaries to free up capacity at one or all of the schools that may serve the Project. Although the LEUSD would need to construct new school facilities to meet the growing demand within this part of the City of Lake Elsinore, there are no current publicly-available plans detailing where such facilities would be built. Although the Project would contribute to the need for new or expanded school facilities, it is not possible to identify environmental impacts that may be associated with the construction of new or expanded school facilities until a specific proposal and design for the facility is prepared by the LEUSD, and an analysis of potential physical environmental impacts resulting from the construction and operation of new or expanded school facilities would be speculative in nature (see CEQA Guidelines § 15145). Environmental effects of such school facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded school facilities. Any mitigation measures required for new or expanded school facilities could be funded, in part, from property taxes and/or through payment of school impact fees (as discussed below).

Although it is not possible to identify physical environmental effects that may result from new or expanded school facilities, the Project would be required to contribute fees to the LEUSD in accordance with the City of Lake Elsinore Municipal Code Chapter 3.36. Pursuant to the Leroy F. Greene School Facilities Act of 1998, payment of school impact fees constitutes full and complete mitigation for project-related impacts to school services. Although the Project's demand for school services may not be accommodated by existing facilities or staffing levels, mandatory payment of school impact fees still would be required and would ensure that the Project's impacts to school facilities and services would be less than significant. Accordingly, impacts would be less than significant and no mitigation beyond payment of fees would be required.

Threshold d: 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 Parks?

Development of the property with residential and commercial uses would create a demand for public park facilities. As discussed in EIR Section 4.14, *Recreation*, the Project would yield a future population of 628 persons (168 homes x 3.74 persons per household = 628 persons) (USCB, 2016). Thus, the Project would require 3.14 acres of on-site public parkland in order to meet the City of Lake Elsinore's Parks and Recreation Master Plan's objective of providing 5.0 acres of parkland per 1,000 persons (628 persons x 5.0 acres /1,000 persons = 3.14 acres of parkland required) (Lake Elsinore, 2011b, p. 3.15-18). The Project would provide 8.3 acres of public parkland on-site, including a 6.5-acre linear park located in the southern portion of the Project site south of Stovepipe Creek, and a 1.8-acre neighborhood park located in the eastern portion of the Project site north of Stovepipe Creek thus, the Project would exceed the City's requirement for parkland development by 5.16 acres (8.3 acres of proposed parkland – 3.14 acres of required parkland = 5.16 acres of exceeding parkland). As concluded throughout this EIR, the Project's direct and cumulative impacts associated with construction of on-site park facilities would be less than significant, or would be reduced to below a level of significance with the application of mitigation measures. There are no impacts that would occur specifically related to on-site park development; accordingly, impacts would be less than significant.

***Threshold e:** 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 Other public facilities?*

Development of the proposed Project would increase the region's population, creating an additional demand for library facilities and services. Development of the site with 168 residential homes would result in an increase in the area's population by approximately 628 residents (USCB, 2016).

Although use of the internet has resulted in decreased demand being placed on library services nation-wide, the City continues to maintain its standards for book titles and library square footage. Library services in the City of Lake Elsinore are provided by the Riverside Public Library System. To attain the RCPLS level of service standard of 2.5 titles-per-capita, the Project-generated population would require an additional 1,570 book titles (2.5 titles-per-capita x 628 residents = 1,570 titles). To attain the RCPLS standard of 0.5 square foot of library space per capita, the Project would create the demand for 314 square feet of additional library space (0.5 s.f. of library space per capita x 628 residents = 314 s.f. of library space).

Development of the Project would contribute to an existing deficiency in library service standards. The provision of additional library space would be addressed through the City's compliance with the adopted level of service standards. Additionally, mandatory compliance with City of Lake Elsinore Municipal Code Chapter 8.02 requires payment of public facility impact fees. These fees would provide funding for library books and library expansion projects. Although new library facilities are being considered by the RCPLS in the Lake Elsinore area it is not possible to identify environmental impacts that may be associated with the development of this new library facility until a specific proposal and design for the facility is prepared by the RCPLS. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for



evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. Any mitigation measures required for new or expanded library facilities could be funded, in part, from property taxes to such purposes. As such, Project impacts to library facilities and resources are evaluated as less than significant.

4.14.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site, including buildout of the City of Lake Elsinore General Plan Land Use Plan. This study area was selected because public services are provided to most of the existing and planned developments in the City of Lake Elsinore by the same service providers.

Although the proposed Project would be adequately served by fire protection services, based on the proximity and response times estimated from nearby fire station facilities, the Project would nonetheless result in an incremental increase in requests for service, which would affect the fire department's ability to provide acceptable levels of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, increased traffic volumes, and increased population. When considered in the context of on-going cumulative development throughout the City of Lake Elsinore and surrounding areas, such impacts would be cumulatively considerable. However, the proposed Project and all cumulative developments would be required to contribute DIF fees pursuant to City of Lake Elsinore Municipal Code Chapter 16.74 or similar ordinances for surrounding jurisdictions. Mandatory DIF fee contributions by the Project and cumulative developments would ensure that adequate funding is provided to the RCFD for the acquisition of additional facilities, equipment, and personnel. Accordingly, the proposed Project's impact to the RCFD is evaluated as less than significant on a cumulative basis with the payment of DIF fees.

Although the Project site would be adequately served by sheriff facilities, the increased population that would be generated by the Project, when considered in conjunction with other on-going development throughout City of Lake Elsinore, has the potential to adversely affect service response times. However, the proposed Project and all cumulative developments would be required to contribute DIF fees pursuant to City of Lake Elsinore Municipal Code Chapter 16.74, which would help to provide for adequate equipment and personnel in the Project area. Therefore, with mandatory payment of DIF fees, Project impacts to police protection services would be less than significant on a cumulative basis.

The proposed Project, when considered in conjunction with on-going development throughout the LEUSD service area, would cumulatively affect the ability of these school districts to provide school services. As the above analysis demonstrates, the existing capacity at schools that service the Project area is not sufficient to accommodate Project-generated students. However, the Project and all cumulative developments would be required to contribute fees to the LEUSD, or other applicable school districts, in accordance with Public Education Code §§ 17620-17626. Pursuant to the Leroy F. Greene School Facilities Act of 1998, payment of school impact fees constitutes complete mitigation for project-related impacts to school services. Therefore,



although the Project's impacts to school services would be cumulatively considerable, cumulative impacts would be less than significant with contribution of mandatory school impact fees.

The proposed Project requires 3.14 acres of on-site parkland in order to meet the City's objective of providing 5.0 acres of parkland per 1,000 persons. Because the Project proposes 8.3 acres of parkland, the Project would meet the City's requirement for parkland development. Additionally, mandatory fees would ensure the provision of parkland in accordance with City standards and would ensure that cumulatively-significant impacts would not occur.

The proposed Project, when considered in conjunction with on-going development throughout the City of Lake Elsinore, would cumulatively affect the ability of the RCPLS to serve the local community with library services. It is not possible to identify environmental impacts that may be associated with such new or expanded library facilities until a specific proposal and design for such facilities are prepared. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. However, the Project and all cumulative developments would contribute property taxes and would be required to contribute DIF fees to City of Lake Elsinore pursuant to City of Lake Elsinore Municipal Code Chapter 16.74, which could be used for the purpose of acquiring book titles and/or additional library square footage. Any mitigation measures required for new or expanded library facilities also could be funded, in part, from property taxes allocated to such purposes. Therefore, because environmental impacts associated with new or expanded library facilities cannot be known at this time and would be determined in the future once the RCPLS identifies a specific proposal for new or expanded library facilities, Project impacts to library services and facilities are evaluated as less than significant on a cumulative basis.

4.14.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-Than-Significant Impact. With payment of mandatory DIF fees, the proposed Project's potential direct and cumulatively-considerable impacts to the RCFD would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new fire protection facilities that could result in a significant impact to the environment.

Threshold b: Less-Than-Significant Impact. With payment of mandatory DIF fees, the proposed Project's potential direct and cumulatively-considerable impacts to the RCSD would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new police protection facilities that could result in a significant impact to the environment.

Threshold c: Less-Than-Significant Impact. The Project would generate approximately 95 students, which would not be accommodated within LEUSD's existing capacity. Although the LEUSD would need to construct new school facilities to meet the growing demand within this part of Lake Elsinore, there are no current publicly-available plans detailing where such facilities would be built. Although the Project would contribute to the need for new or expanded school facilities, it is not possible to identify environmental impacts that may be associated with the construction of new or expanded school facilities until a specific proposal and design for the facility is prepared by the LEUSD, and an analysis of potential physical environmental impacts



resulting from the construction and operation of new or expanded school facilities would be speculative in nature (see CEQA Guidelines § 15145). Environmental effects of such school facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded school facilities. Any mitigation measures required for new or expanded school facilities could be funded, in part, from property taxes and/or through payment of school impact fees. Furthermore, the payment of mandatory school impact fees would ensure that the Project would not result in significant direct or cumulatively-considerable impacts to the ability of the LEUSD to provide for school services. The Project would not require the construction of new school facilities that could result in a significant impact to the environment.

Threshold d: Less-Than-Significant Impact. With construction of public parkland on-site as required by the City of Lake Elsinore's Park and Recreation Master Plan, the proposed Project's direct and cumulatively-considerable park impacts to the City of Lake Elsinore would be reduced to less-than-significant levels, and the Project would not result in or require the construction of new parkland that could result in a significant impact to the environment.

Threshold e: Less-than-Significant Impact. Although the Project would contribute to a need for new or expanded library facilities, it is not possible to identify environmental impacts that may be associated with such new or expanded library facilities until a specific proposal and design for such facilities are prepared by the City of Lake Elsinore. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. However, the Project would be required to contribute DIF fees, which would be used in part to provide for library space and/or new book volumes. Accordingly, with payment of DIF fees, Project impacts to library services and facilities are evaluated as less than significant on both a direct and cumulatively-considerable basis.

4.14.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project would be required to conform to all mandatory local, state, and federal laws, ordinances, and standards relating to fire safety. Among other items, these requirements include conformance with the Uniform Building Code Section 1503, which requires that all buildings be constructed with fire retardant roofing material, as well as standard Riverside County Fire Department conditions of approval (COAs) for specific plans, which prohibit flag lots and require alternative/secondary access routes to neighborhoods. The alternative/secondary access routes would be required to be maintained throughout construction and buildout of the proposed Project.
- The Project would be required to adhere to City of Lake Elsinore Municipal Code Chapter 16.74, which requires payment of a development impact fee (DIF) to assist the City in providing for fire protection



facilities, including fire stations. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and fire station construction.

- The Project would be required to adhere to City of Lake Elsinore Municipal Code Chapter 16.74, which requires payment of a development impact fee (DIF) to assist the City in providing for sheriff protection facilities, including sheriff stations. Payment of the DIF fee would ensure that funds are available for additional sheriff personnel as well as capital improvements, such as land/equipment purchases and sheriff station construction.
- The Project is required to comply with City of Lake Elsinore Municipal Code Chapter 3.36, which requires mandatory payment of school impact fees pursuant to Public Education Code § 17072.10-18.
- The Project would be required to comply with the City of Lake Elsinore's Parks and Recreation Master Plan, which sets forth a parkland standard of 5.0 acres per 1,000 residents, specifies parkland dedication requirements, and imposes in-lieu park impact fees to address potential parkland deficiencies.
- The Project would be required to adhere to City of Lake Elsinore Municipal Code Chapter 16.74, which requires payment of a development impact fee (DIF) to assist the City in providing for library facilities. Payment of the DIF fee would ensure that funds are available for capital improvements, such as land/equipment purchases and library construction.

Mitigation

Impacts to public services as a result of Project implementation would be less than significant, and mitigation is not required.



4.15 RECREATION

This Subsection provides an overview of the existing parks and recreational facilities that occur within the Project vicinity and that could potentially be indirectly physically affected by implementation of the proposed Project. This Subsection also describes on-site recreational facilities proposed by the Nichols Ranch Specific Plan (SP 2018-01) and provides an analysis of the potential environmental effects that could occur due to the construction of such recreational facilities on-site. The analysis herein is based in part on the City of Lake Elsinore General Plan Parks and Recreation and Circulation Elements.

4.15.1 EXISTING CONDITIONS

A. Federal Parks

There are no federal parks located within the area immediately surrounding the Project site. The nearest federal park is the Cleveland National Forest located approximately 4.5 miles southwest of the Project site. (Google Earth, 2016)

B. State Parks

There are no California State Parks located within the Project site's immediate vicinity. The nearest California State Park is the Lake Perris State Recreation Area located approximately 13.5 miles northeast of the Project site. The Lake Perris State Recreation Area includes boating, campsites, bike trails, hiking trails, picnic areas, an environmental learning center, and a beach area. (Google Earth, 2016; CADPR, 2018)

C. Regional and Local Parks

As shown in Figure 4.15-1, *Existing Local and Regional Recreation Facilities*, several parks occur within a two-mile radius of the Project site, and are described below:

- **Rosetta Canyon Sports Park.** Rosetta Canyon Community Park is a local community park located approximately 1.5 miles southeast of the Project site. This facility includes five ball fields, one soccer field, two basketball courts, two tennis courts, a dog park, trails, play equipment, picnic areas, and several barbecues. (Lake Elsinore, 2011b, Table 3.15-1; Google Earth, 2016)
- **Alberhill Ranch Community Park.** Alberhill Ranch Community Park is a local community park located approximately 1.9 miles west of the Project site. This facility includes three ball fields, two sports fields, a basketball court, play equipment, and picnic areas. (Lake Elsinore, 2011b, Table 3.15-1; Google Earth, 2016)
- **Machado Park.** Machado Park is a neighborhood park located approximately 2.0 miles southwest of the Project site. This facility includes turf areas, tennis courts, play equipment, picnic areas, barbecues, and trails. (Lake Elsinore, 2011b, Table 3.15-1; Google Earth, 2016)
- **Summer Lake Park.** Summer Lake Park is a neighborhood park located approximately 2.3 miles southwest of the Project site. This facility includes a large multi-use field, play equipment, picnic areas, and several barbecues. (Lake Elsinore, 2011b, Table 3.15-1; Google Earth, 2016)

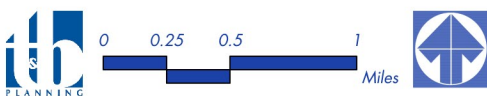
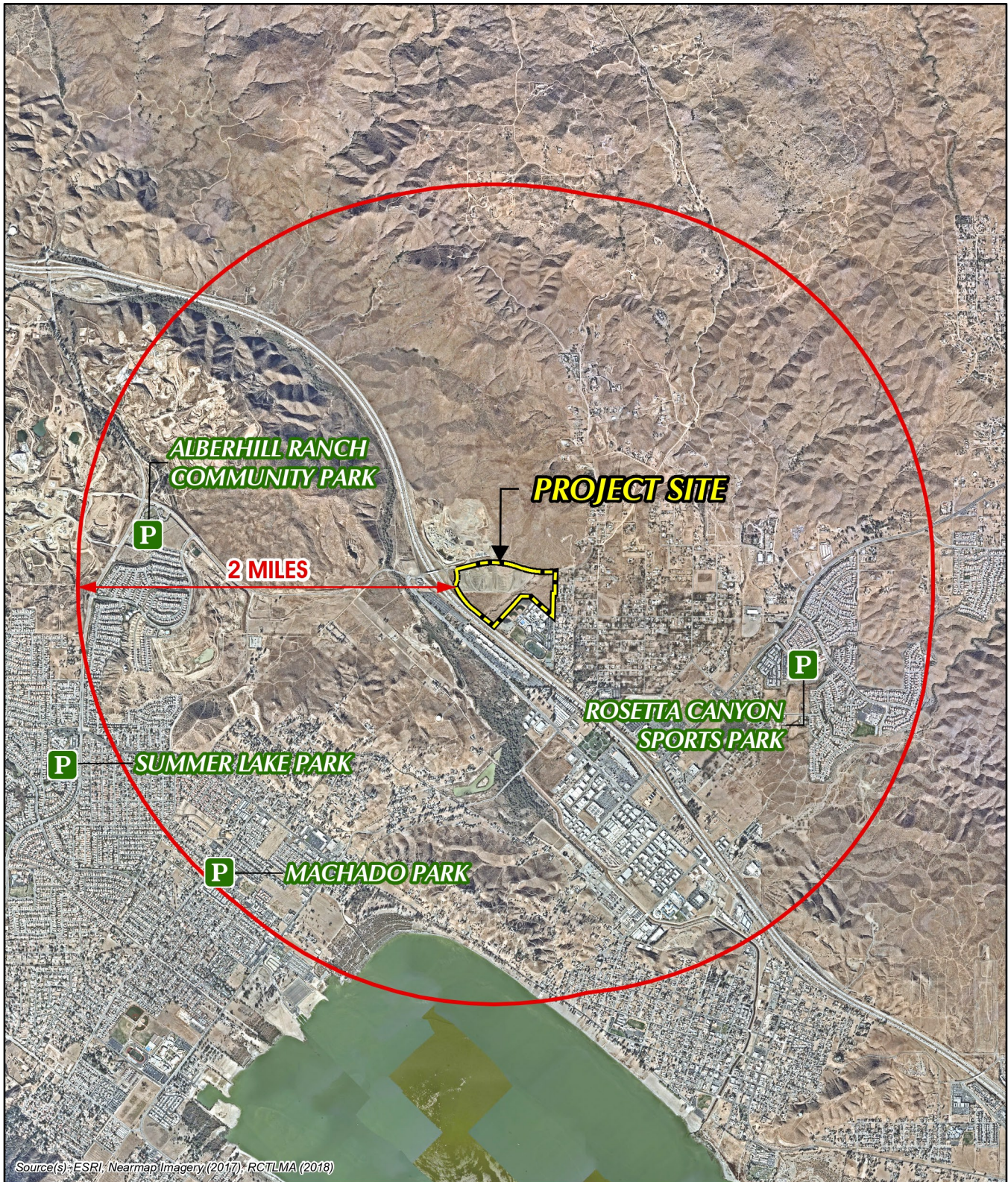


Figure 4.15-1
**EXISTING LOCAL AND
REGIONAL RECREATION FACILITIES**

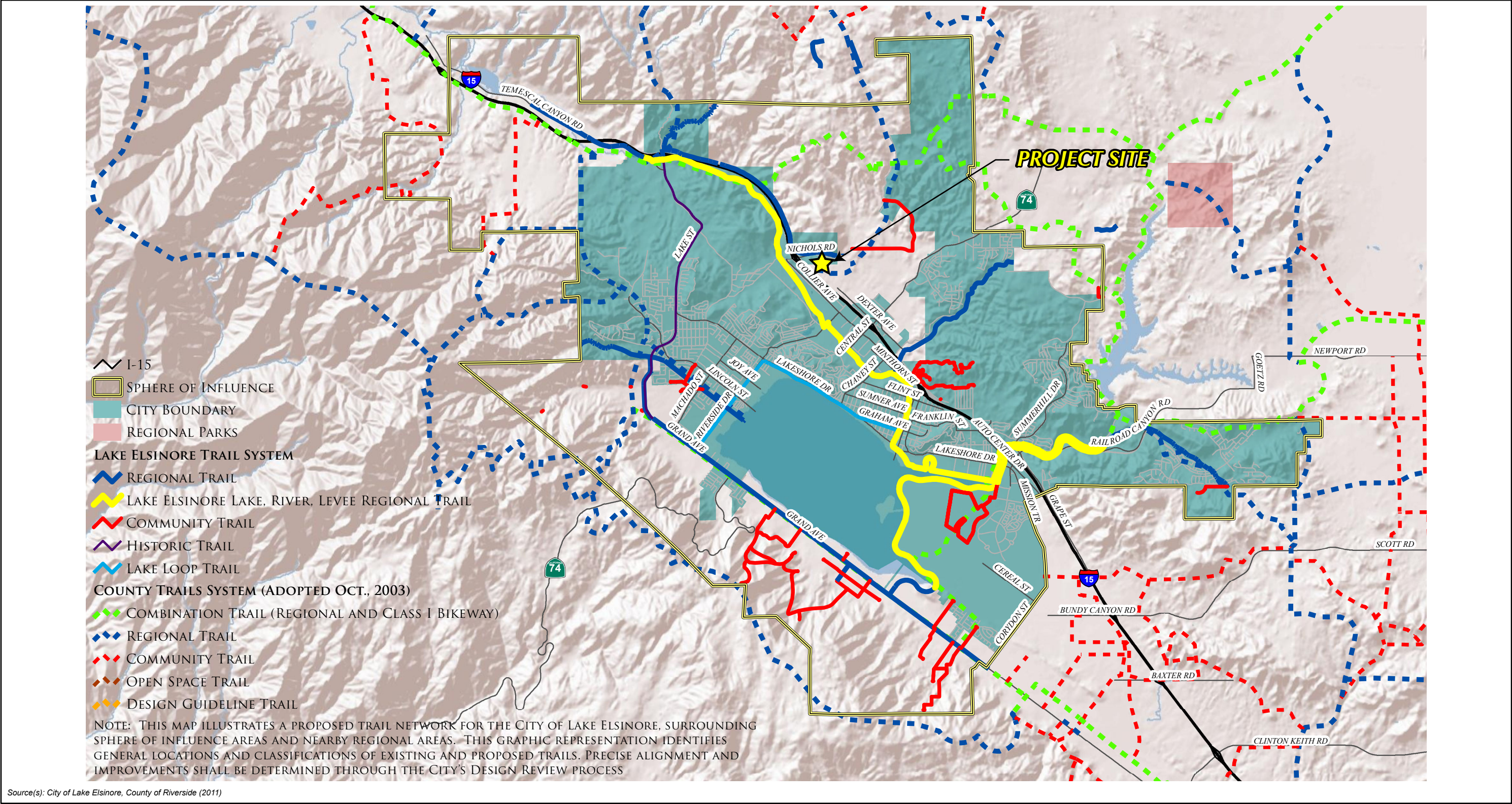
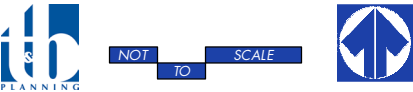


Figure 4.15-2





D. Regional Trails and Bikeway System

The City of Lake Elsinore General Plan identifies the City's long-term objectives for regional trails and bikeways within the City. Figure 4.15-2, *Existing and Planned Trail System*, depicts the existing and planned trail facilities within the Project vicinity. Figure 4.15-3, *Existing and Planned Bikeway System*, depicts the existing and planned bicycle facilities within the Project vicinity. As shown in Figure 4.15-2, a "Riverside County Regional Trail" is planned to traverse through the southern portion of the Project site along Stovepipe Creek and a "Lake Elsinore Regional Trail" is planned along Nichols Road which is directly north of the Project site. As shown in Figure 4.15-3, a Class II bike lane is planned along Nichols Road which directly abuts the northern Project boundary.

4.15.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the state and local environmental laws and related regulations related to recreation.

A. State Regulations

1. Quimby Act, California Government Code § 66477

The State of California's Quimby Act was established by the California Legislature for the purpose of preserving open space and providing park facilities for California's growing communities. The Quimby Act allows local agencies to establish ordinances requiring residential subdivisions to provide land or "in-lieu-of" fees for park and recreation purposes. This State Act requires the dedication of land and/or imposes a requirement of fees for park and recreational purposes as a condition of approval of tentative tract map or parcel map.

B. Local Regulations

1. City of Lake Elsinore General Plan – Circulation Element

The City of Lake Elsinore General Plan, approved in 2011, is a policy document that reflects the City's vision for the future of Lake Elsinore. The General Plan includes a Circulation Element which has the purpose of providing for the movement of goods and people, including pedestrians, bicycles, transit, train, air and automobile traffic flows within and through the community. The Circulation Element identifies the location of all existing and planned trails in the Project's vicinity and includes a bikeway plan. The Circulation Element identifies a "Riverside County Regional Trail" within the southern portion of the Project site along Stovepipe Creek and a "Lake Elsinore Regional Trail" along Nichols Road abutting the Project's northern boundary. The Circulation Element also identifies a Class II bike lane along Nichols Road which abuts the Project's northern boundary. (Lake Elsinore, 2011a, Figure 2.5; Figure 2.6)

2. City of Lake Elsinore Parks and Recreation Master Plan

The City's Parks and Recreation Master Plan was adopted July 14, 2009. The Master Plan identifies the City of Lake Elsinore's park, recreation, and trail needs, makes recommendations to meet the needs of Lake Elsinore, and proposes an action plan, including funding strategies, to help facilitate the implementation of

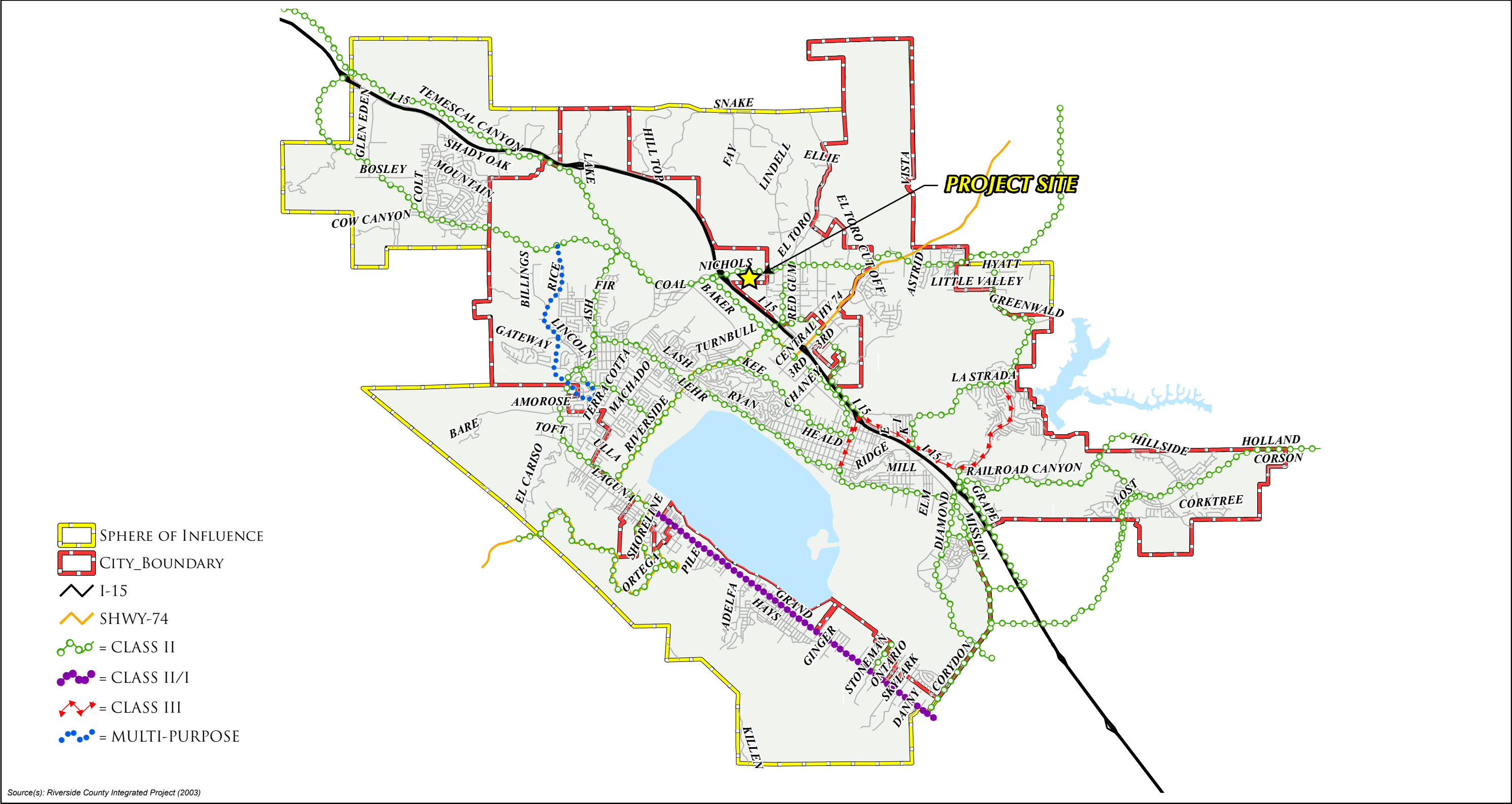
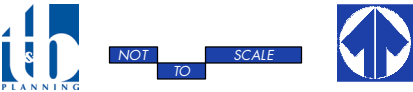


Figure 4.15-3



EXISTING AND PLANNED BIKEWAY SYSTEM



recommendations. In addition, the Master Plan sets forth recreational facility standards for different facility types. The Master Plan also provides a framework for renovation and developments of park improvements and establishes a parkland standard requirement of five acres of usable park land per 1,000 persons. (Lake Elsinore, 2011b, p. 3.15-8)

3. *Riverside County General Plan*

At the time the General Plan EIR was certified in 2011, the northern 45.4 acres of the Project site were located in within the City of Lake Elsinore, while the southern 27.1 acres were located within Riverside County. Thus, the southern 27.1 acres were subject to the regulations of the Riverside County General Plan. The southern 27.1 acres of the Project site were annexed into the City of Lake Elsinore on November 10, 2016 (Annexation No. 83) (RLAFCO, 2016). Thus, it should be noted that the Riverside County General Plan no longer applies to the southern 27.1 acres of the Project site.

4. *Riverside County General Plan - Elsinore Area Plan*

The Riverside County General Plan covers the entire unincorporated portion of the County and is augmented by 19 Plan Areas. The Elsinore Area Plan (which includes the City and the nearby City of Canyon Lake) includes a multi-purpose trails system that connects various neighborhoods within the area plan with the recreational resources of the Cleveland National Forest and the regional trail system. The Riverside County General Plan Trails System within the City of Lake Elsinore is included in Figure 4.15-2. (Lake Elsinore, 2011b, pp 3.15-7 - 3.15-8)

5. *City of Lake Elsinore Municipal Code Chapter 16.12 and Chapter 16.34*

Chapter 16.12 of the City of Lake Elsinore Municipal Code addresses park and recreation facilities and states that the “land divider shall either dedicate land or pay a fee in lieu thereof, or a combination of the two, at the option of the City, for park or recreational” purposes. Chapter 16.34 (Required Improvements) requires that prior to the issuance of a building permit, the applicant must pay fees for the purposes set forth in that section. Paragraph D of Section 16.34.060 describes the City’s Park Capital Improvement Fund and states that “For the purpose of purchasing the land and developing and maintaining the City park system, the City Council shall have the option to request dedication for park purposes or in lieu thereof, request that the applicant pay a fee in accordance with the resolution setting said fee.” (Lake Elsinore, 2011b, p. 3.15-9)

4.15.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to recreation if the Project or any Project-related component would:

- a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or*
- b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.*



The above listed thresholds are derived directly from Section XVI of Appendix G to the CEQA Guidelines and address typical adverse effects to recreation (OPR, 2018).

4.15.4 IMPACT ANALYSIS

Threshold a: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Project proposes the construction of 8.3 acres of parkland, including a 6.5-acre linear park within Planning Area 8 and a 1.8-acre neighborhood park within Planning Area 10. The Project also proposes the construction of up to 168 dwelling units on-site, which would result in an increase to the City's population by up to 628 persons (168 dwelling units x 3.74 persons per household = 628 future residents) (USCB, 2016). The City of Lake Elsinore Parks and Recreation Master Plan specifies that the minimum park standard is 5.0 acres for each 1,000 residents (Lake Elsinore, 2008, p. 8-1). Thus, the Project's future population of 628 residents would result in the need for 3.1 acres of parkland (628 persons x 5.0 acres /1,000 persons = 3.1 acres). The Project proposes to provide 8.3 acres of active and passive recreation on-site. Thus, the Project would exceed the parkland requirements of the City of Lake Elsinore requirement of 5.0 acres of parkland per 1,000 persons by 5.2 acres. Accordingly, the Project would not result in or require the development of new parkland to serve future Project residents beyond what is planned within the Project's boundaries.

The Project proposes the construction of trails in accordance with the City of Lake Elsinore General Plan Circulation Element. The Project includes a curb-separated sidewalk along Nichols Road abutting the Project's northern boundary, a trail along Stovepipe Creek within Planning Area 8, and a trail along Stovepipe Creek within Planning Area 10. The trail within Planning Area 8 would connect to planned pedestrian facilities on "B" Street and would provide pedestrian connectivity north to the trail in Planning Area 10, and further north to the pedestrian facilities in Nichols Road. The regional trail would provide connection to Nichols Road which would provide a connection to future regional trail projects in accordance with Figure 4.15-2. The General Plan Circulation Element plans for a Class II bicycle lane along both sides of Nichols Road, directly north of the Project. The Project accommodates half-width frontage improvements including a 6-foot wide Class II bicycle lane on the southern edge of the roadway. The Class II bicycle lane along the northern edge of Nichols Road would be built by others in the future. (Lake Elsinore, 2011a, Figure 2.5; Figure 2.6)

Given the excess amount of parkland and trails planned within the Project area, it is unlikely that future Project residents would utilize parkland resources outside of the Project boundaries to the point that physical deterioration of such facilities would occur or would be accelerated. Moreover, it is likely that any incremental increase in the use of existing off-site recreational facilities as a result of the Project would be off-set by existing City residents utilizing proposed recreational facilities on-site. Implementation of the Project would not otherwise result in significant environmental effects related to parks. Accordingly, impacts to the environment resulting from the Project's demand for parkland resources would be less than significant.



Threshold b: Would the Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The Project proposes the construction of 8.3 acres of parkland, including a 6.5-acre linear park within Planning Area 8 and a 1.8-acre neighborhood park within Planning Area 10. The Project's recreational facilities would be developed as part of Phase 2 of Project development. The physical construction of the on-site recreation facilities has been addressed under the relevant issue areas identified throughout this EIR (e.g., air quality, biological resources, historical/archeological resources, etc.). Under each of these topics, the Project impacts are determined to be less than significant, or mitigation measures have been imposed to reduce impacts to the maximum feasible extent. There are no components of the planned recreation facilities on-site that have not already been addressed and accounted for throughout this EIR for the Project site. Accordingly, Project impacts due to parkland development on-site would be less than significant, requiring no mitigation beyond that which is identified in other portions of this EIR.

Additionally, and as noted under Threshold a, the Project would result in a demand for 3.1 acres per the City of Lake Elsinore Parks and Recreation Master Plan, while the Project proposes a total of 8.3 acres of parkland on-site; thus, the Project would exceed the City of Lake Elsinore parkland provision requirement by 5.2 acres. Thus, the Project would not result in or require the construction of recreational facilities off-site, and no impacts due to off-site parkland construction would occur as a result of the Project.

4.15.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed project in conjunction with other development projects and planned development in the vicinity of the Project site, including build-out of the City of Lake Elsinore General Plan Land Use Plan. This study area was selected because people tend to utilize community recreation facilities that are near where they live.

The Project would be required to comply with the City of Lake Elsinore Parks and Recreation Master Plan, which identifies parkland requirements, specifies parkland dedication requirements, and imposes in-lieu park impact fees. The Project also would be consistent with and would implement a portion of the City of Lake Elsinore General Plan Trails System, included as Figure 4.15-2 in this EIR. Other developments within the City would be subject to City of Lake Elsinore Parks and Recreation Master Plan and would be required to demonstrate compliance with the City of Lake Elsinore General Plan Trails System. Compliance ensures there is enough parkland to serve the population. It is important to note that Project residents and residents from cumulative developments may increase utilization of nearby recreation facilities in the area. The Project proposes construction of a 6.5-acre linear park and a 1.8-acre neighborhood park which would be utilized by Project residents and residents the surrounding area. However, construction of adequate parkland and/or payment of fees by other cumulative developments would ensure the provision of parkland in accordance with City standards and would ensure that cumulatively-considerable impacts would not occur. Accordingly, the Project's impacts due to the physical deterioration of existing parks and recreational facilities within the region would be less-than-cumulatively considerable.

The construction of 8.3 acres of public parkland on-site, and construction of trails and the Class II bicycle land along Nichols Road per the City's General Plan are inherent to the Project's construction phase. Cumulatively-



considerable effects associated with the buildout of these areas have been evaluated throughout appropriate topical headings within this EIR, and where necessary, mitigation measures have been imposed on the Project to reduce impacts to the maximum feasible extent. There are no potential cumulatively-considerable impacts to the environment that would occur that are unique to parkland construction on-site. Accordingly, cumulatively-considerable impacts due to on-site parkland construction would be less than significant.

4.15.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The Project would provide a total of 8.3 acres of public parkland on-site, while only 3.1 acres are required by the City of Lake Elsinore Parks and Recreation Plan; thus, the Project would exceed the City of Lake Elsinore parkland requirement by 5.2 acres. Given the excess amount of parkland planned within the Project area, it is unlikely that future Project residents would utilize parkland resources outside of the Project boundaries to the point that physical deterioration of such facilities would occur or would be accelerated. Moreover, it is likely that any incremental increase in the use of existing recreational uses as a result of the Project would be off-set by existing City residents utilizing proposed recreational facilities on-site. Thus, the Project's impacts to existing parks and recreation facilities in the region would be less than significant.

Threshold b: Less-than-Significant Impact. A 6.5-acre linear park, a 1.8-acre neighborhood park, trails, and a Class II bicycle lane per the City's General Plan are proposed on the Project site. Effects associated with the physical construction of these facilities are addressed under the relevant issue areas identified within this EIR (e.g., air quality, biological resources, cultural resources etc.). As concluded throughout this EIR, the Project's direct and cumulative impacts associated with construction of the Project would be less than significant or would be reduced to the maximum feasible extent with the implementation of mitigation measures.

4.15.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project shall be required to comply with the City of Lake Elsinore Parks and Recreation Plan, which sets forth a parkland standard of 5.0 acres per 1,000 residents.
- The Project shall be required to construct a 6.5-acre linear park and a 1.8-acre neighborhood park consistent with the Nichols Ranch Specific Plan. Construction of the 6.5-acre linear park and a 1.8-acre neighborhood park would serve the parkland needs of the Project's population.
- The Project shall be required to comply with City of Lake Elsinore Municipal Code Chapter 16.12.
- The Project shall be required to comply with City of Lake Elsinore Municipal Code Chapter 16.34.



Mitigation

Impacts to recreation facilities as a result of Project implementation would be less than significant, and mitigation is not required.



4.16 TRANSPORTATION AND TRAFFIC

The following analysis is primarily based on a traffic impact analysis (TIA) prepared by Urban Crossroads, Inc., titled, “Nichols Ranch Traffic Impact Analysis” and dated December 18, 2018. A copy of the TIA report is included as *Technical Appendix L* to this EIR. The TIA evaluates the potential operating deficiencies of traffic and circulation facilities in the proposed Project’s study area and identifies improvements that would be needed to relieve operational deficiencies. As directed by City of Lake Elsinore staff, the TIA has been prepared in accordance with the County of Riverside’s *Traffic Impact Analysis Preparation Guide* (April 2008), the California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (December 2002), and consultation with City of Lake Elsinore staff during the scoping process. The approved Traffic Study Scoping agreement is provided in Appendix 1.1 of the TIA.

On December 28, 2018, updates to the CEQA Guidelines were approved by the Office of Administrative Law (OAL). As part of the updates to the CEQA Guidelines, thresholds of significance for evaluation of impacts to transportation and traffic have changed. The CEQA Guidelines update eliminated the threshold of significance for evaluating impacts due to changes to air traffic patterns, and consolidated the evaluation of impacts due to a conflict with adopted policies, plans, or programs into an analysis of impacts due to a conflict with programs, plans, ordinances, or policies addressing the circulation system (i.e., new Threshold a.). However, new Threshold b. of the CEQA Guidelines for Transportation and Traffic requires an evaluation of impacts due to Vehicle Miles Travelled (VMTs), instead of evaluating impacts based on Level of Service (LOS) criteria, as required by California Senate Bill (SB) 743. LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. In 2013, SB 743 was passed, which is intended to balance the need for LOS for traffic planning with the need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes-competing needs. At full implementation of SB 743, the California Governor’s Office of Planning and Research (OPR) is expected to replace LOS as the metric against which traffic impacts are evaluated, with a metric based on VMTs. As a component of OPR’s revisions to the CEQA Guidelines in December 2018, lead agencies will be required to adopt VMT thresholds of significance by July 2020. At the time this EIR was prepared, a VMT metric was not published by OPR, and the City of Lake Elsinore in its capacity as Lead Agency, as well as surrounding local agencies in which the Project’s traffic would circulate, use LOS as the significance criteria for evaluating a Project’s traffic impacts. For this reason, a LOS metric and not a VMT metric is appropriately used in this EIR.

4.16.1 STUDY AREA DESCRIPTION

The geographic area that was evaluated for Project-related effects to the transportation and circulation network (hereafter referred to as the “Project study area”) is defined in the following subsections.

A. Intersections

The 21 study area intersections listed in Table 4.16-1, *Intersection Analysis Locations*, and depicted on Figure 4.16-1, *Intersection Analysis Locations*, were selected for the Project’s TIA based on consultation with City of Lake Elsinore staff. As directed by City of Lake Elsinore staff, the TIA has been prepared in accordance



Table 4.16-1 Intersection Analysis Locations

ID	Intersection Location	Jurisdiction
1	Lake St. & Nichols Rd.	Lake Elsinore, County of Riverside
2	Lake St. & Alberhill Ranch Rd.	Lake Elsinore, County of Riverside
3	Alberhill Ranch Rd. & Nichols Rd.	Lake Elsinore
4	Lakeshore Dr. & Riverside Dr. (SR-74)	Lake Elsinore, Caltrans
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	Lake Elsinore, Caltrans
6	Collier Av. & Nichols Rd.	Lake Elsinore
7	Collier Av. & Riverside Dr. (SR-74)	Lake Elsinore, Caltrans
8	Collier Av. & Central Av. (SR-74)	Lake Elsinore, County of Riverside, Caltrans
9	I-15 Southbound Ramps & Nichols Rd.	Lake Elsinore, Caltrans
10	I-15 Northbound Ramps & Nichols Rd.	Lake Elsinore, Caltrans
11	A Street & Nichols Rd.	Lake Elsinore
12	B Street & Nichols Rd.	Lake Elsinore
13	B Street & F Street – Future Intersection	Lake Elsinore
14	B Street & H Street – Future Intersection	Lake Elsinore
15	K Street & B Street – Future Intersection	Lake Elsinore
16	El Toro Rd. & B Street – Future Intersection	Lake Elsinore, County of Riverside
17	El Toro Rd. & Tereticornis Av.	County of Riverside
18	El Toro Rd. & Carmela Ct.	County of Riverside
19	Dexter Av. & Central Av. (SR-74)	Lake Elsinore, Caltrans
20	Camburn Av. & Central Av. (SR-74)	Lake Elsinore, County of Riverside, Caltrans
21	Driveway 1 & Nichols Rd.	Lake Elsinore

(Urban Crossroads, 2018c, Table 1-1)

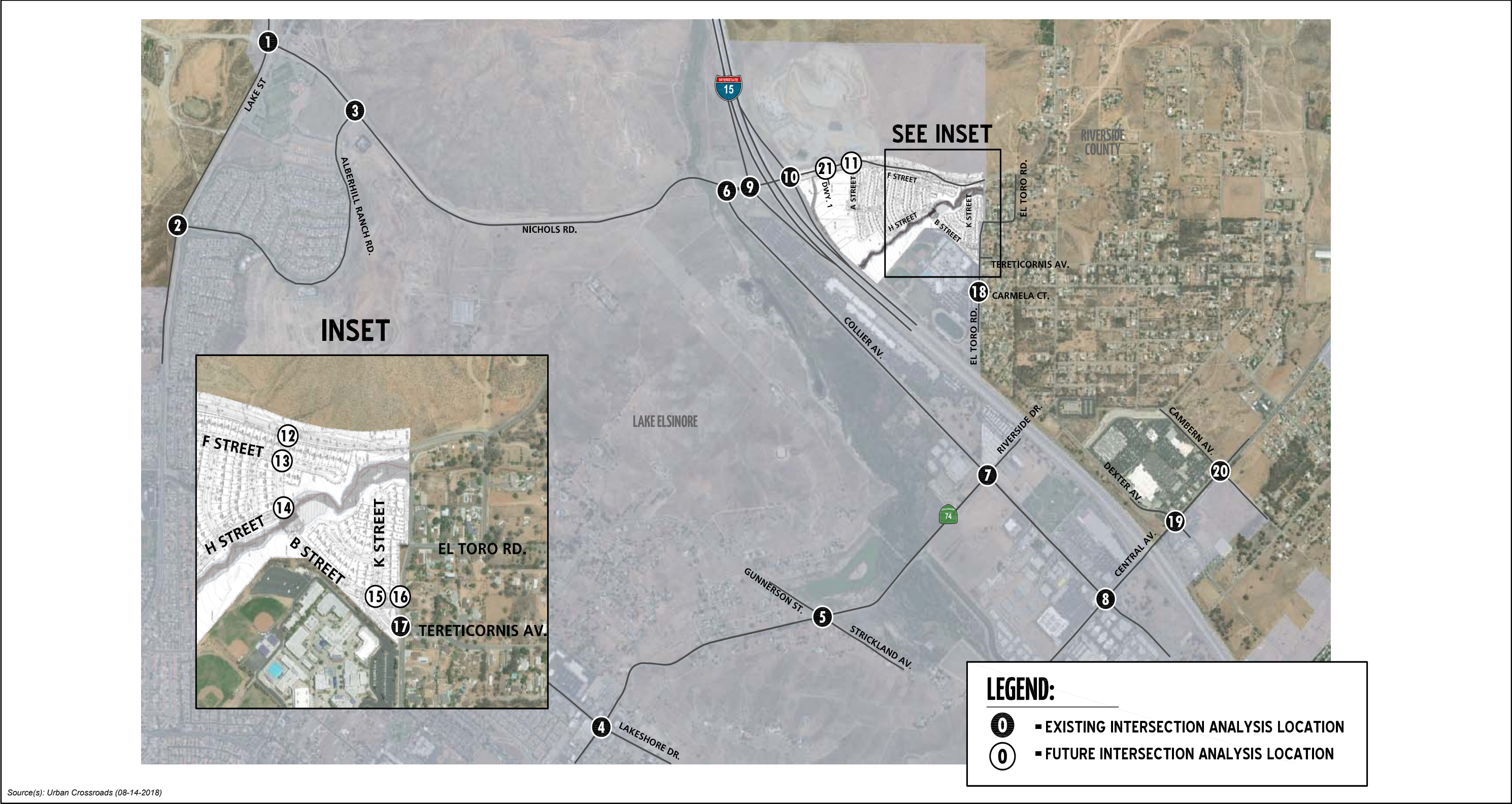


Figure 4.16-1



with the County of Riverside's Traffic Impact Analysis Preparation Guide (April 2008) as the City does not have their own guidelines. The study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the County's traffic study guidelines. Furthermore, the rationale for evaluating intersections where a project would contribute 50 or more peak-hour trips is standard industry practice and supported by substantial evidence. It should also be noted that the 50 peak hour trip threshold is used by several other lead agencies throughout Southern California, including Caltrans and County of Riverside. In effect, these jurisdictions have established 50 project trips as the threshold of significance for when to analyze signalized intersections. Therefore, a project trip contribution of less than 50 peak hour trips is typically not evaluated. (Urban Crossroads, 2018c, p. 5)

B. Freeway Mainline Segments

Study area freeway mainline analysis locations were selected based on Caltrans traffic study guidelines, which may require the analysis of State highway facilities. The Project is anticipated to contribute more than 50 peak hour trips to the State Highway System (SHS), as such, the TIA evaluates the freeway segments adjacent to the point of entry to the SHS as listed in Table 4.16-2, *Freeway Mainline Segment Analysis Locations*. (Urban Crossroads, 2018c, p. 7)

Table 4.16-2 Freeway Mainline Segment Analysis Locations

ID	Freeway Mainline Segments
1	I-15 Freeway – Southbound, North of Nichols Road
2	I-15 Freeway – Southbound, South of Nichols Road
3	I-15 Freeway – Northbound, North of Nichols Road
4	I-15 Freeway – Northbound, South of Nichols Road

(Urban Crossroads, 2018c, Table 1-2)

C. Freeway Merge/Diverge Junctions

Similarly, the Project is anticipated to contribute more than 50 peak hour trips to the study area freeway merge/diverge ramp junction analysis locations, as such, the freeway ramp junctions for each direction of flow as shown on Table 4.16-3, *Freeway Merge/Diverge Ramp Junction Analysis Locations*, were evaluated as part of the TIA. (Urban Crossroads, 2018c, p. 7)

Table 4.16-3 Freeway Merge/Diverge Ramp Junction Analysis Locations

ID	Freeway Merge/Diverge Ramp Junctions
1	I-15 Freeway – Southbound, Off-Ramp at Nichols Road (Diverge)
2	I-15 Freeway – Southbound, On-Ramp at Nichols Road (Merge)
3	I-15 Freeway – Northbound, On-Ramp at Nichols Road (Merge)
4	I-15 Freeway – Northbound, Off-Ramp at Nichols Road (Diverge)

(Urban Crossroads, 2018c, Table 1-3)



4.16.2 METHODOLOGIES FOR DETERMINING TRANSPORTATION FACILITY DEFICIENCIES

A. 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. (Urban Crossroads, 2018c, p. 37)

LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. In 2013, California Senate Bill (SB) 743 was passed, which is intended to balance the need for LOS for traffic planning with the need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes-competing needs. At full implementation of SB 743, the California Governor's Office of Planning and Research (OPR) is expected to replace LOS as the metric against which traffic impacts are evaluated, with a metric based on vehicle miles traveled (VMT). At the time the NOP for this EIR was released (May 25, 2018), a VMT metric was not published by OPR, and the City of Lake Elsinore in its capacity as Lead Agency, as well as surrounding local agencies in which the Project's traffic would circulate, use LOS as the significance criteria for evaluating a Project's traffic impacts. For this reason, a LOS metric and not a VMT metric is appropriately used in this EIR.

B. Analysis Methodologies

1. Intersection Capacity Analysis

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. (Urban Crossroads, 2018c, p. 37)

☐ Signalized Intersections

City of Lake Elsinore

The City of Lake Elsinore requires signalized intersection operations analysis based on the methodology described in the HCM. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 4.16-4, *Signalized Intersection LOS Thresholds*. Study area intersections have been evaluated using the Synchro (Version 10) analysis software package. (Urban Crossroads, 2018c, p. 37)

Table 4.16-4 Signalized Intersection LOS Thresholds

Description	Average Control Delay (Seconds), $V/C \leq 1.0$	Level of Service, $V/C \leq 1.0$	Level of Service, $V/C > 1.0$
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM (6th Edition)

(Urban Crossroads, 2018c, Table 2-1)

Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network. (Urban Crossroads, 2018c, p. 37)

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. $PHF = [Hourly\ Volume] / [4 \times Peak\ 15-minute\ Flow\ Rate]$). 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, 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. (Urban Crossroads, 2018c, p. 38)

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) has also been utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e. I-15 Freeway ramps at Nichols Road). (Urban Crossroads, 2018c, p. 38)



□ Unsignalized Intersections

The City of Lake Elsinore requires the operations of unsignalized intersections be evaluated using the methodology described the HCM. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle, as summarized in Table 4.16-5, *Unsignalized Intersection LOS Thresholds*. (Urban Crossroads, 2018c, p. 39)

Table 4.16-5 Unsignalized Intersection LOS Thresholds

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM (6th Edition)

(Urban Crossroads, 2018c, Table 2-2)

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole. (Urban Crossroads, 2018c, p. 39)

2. ***Freeway Off-Ramp Queuing Analysis***

The study area for the TIA includes the freeway-to-arterial interchange of the I-15 Freeway at Nichols Road off-ramps. Consistent with Caltrans' requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections on Nichols Road. Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-15 Freeway mainline from the offramps. (Urban Crossroads, 2018c, p. 39)

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/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 queue length reported is for the lane with the highest queue in the lane group. (Urban Crossroads, 2018c, p. 39)

There are two footnotes which appear on the Synchro outputs. One footnote 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. The other footnote indicates whether or not the volume for the 95th percentile queue is metered by an upstream



signal. In many cases, the 95th percentile queue will not be experienced and may potentially be less than the 50th percentile queue due to upstream metering. If the upstream intersection is at or near capacity, the 50th percentile queue represents the maximum queue experienced. (Urban Crossroads, 2018c, pp. 39-40)

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 TIA 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. The 50th percentile or average queue represents the typical queue length for peak hour traffic conditions, while the 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations. (Urban Crossroads, 2018c, p. 40)

3. **Traffic Signal Warrant Analysis Methodology**

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. The Project's TIA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (Urban Crossroads, 2018c, p. 40)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The 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 utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for the Project's TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of analysis, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection. (Urban Crossroads, 2018c, p. 40)

Table 4.16-6, *Traffic Signal Warrant Analysis Locations*, shows the unsignalized study area intersections for which traffic signal warrant analyses were performed during the peak weekday conditions wherein the Project is anticipated to contribute the highest trips. (Urban Crossroads, 2018c, p. 40)

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant. (Urban Crossroads, 2018c, p. 41)



Table 4.16-6 Traffic Signal Warrant Analysis Locations

ID	Intersection Location	Jurisdiction
3	Alberhill Ranch Rd. & Nichols Rd.	Lake Elsinore
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	Lake Elsinore, Caltrans
6	Collier Av. & Nichols Rd.	Lake Elsinore
9	I-15 Southbound Ramps & Nichols Rd.	Lake Elsinore, Caltrans
10	I-15 Northbound Ramps & Nichols Rd.	Lake Elsinore, Caltrans
11	A Street & Nichols Rd.	Lake Elsinore
12	B Street & Nichols Rd.	Lake Elsinore
13	B Street & F Street – Future Intersection	Lake Elsinore
14	B Street & H Street – Future Intersection	Lake Elsinore
15	K Street & B Street – Future Intersection	Lake Elsinore
16	El Toro Rd. & B Street – Future Intersection	Lake Elsinore, County of Riverside
17	El Toro Rd. & Tereticornis Av.	County of Riverside
18	El Toro Rd. & Carmela Ct.	County of Riverside

(Urban Crossroads, 2018c, Table 2-3)

4. Freeway Mainline Segment Analysis Methodology

Consistent with recent Caltrans guidance and because deficiencies to freeway segments dissipate with distance from the point of State Highway System (SHS) entry, quantitative study of freeway segments beyond those immediately adjacent to the point of entry is not required. As such, the Project's TIA has evaluated the freeway segments along the I-15 Freeway where the Project is anticipated to contribute 50 or more peak hour trips. (Urban Crossroads, 2018c, p. 41)

The freeway system in the study area has been broken into segments defined by the freeway-to-arterial interchange locations. The freeway segments have been evaluated in the Project's TIA based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in the HCM and performed using 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 4.16-7, *Description of Freeway Mainline LOS*, illustrates the freeway segment LOS descriptions for each density range utilized for the analysis. (Urban Crossroads, 2018c, pp. 41-42)

The number of lanes for existing baseline conditions has been obtained from field observations conducted by Urban Crossroads in April 2018. These existing freeway geometrics have been utilized for Existing, Existing plus Project (E+P), Existing plus Ambient plus Project (EAP), and Existing plus Ambient plus Project plus Cumulative (EAPC) conditions. (Urban Crossroads, 2018c, p. 42)

The I-15 Freeway mainline volume data were obtained from the Caltrans Performance Measurement System (PeMS) website for the segments of the I-15 Freeway interchange, north of Nichols Road. The data was obtained from February 2018. In an effort to conduct a conservative analysis, the maximum value observed within the three-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak



hours. In addition, truck traffic, represented as a percentage of total traffic, has been utilized for the purposes of analysis in an effort to not overstate traffic volumes and peak hour deficiencies. (Urban Crossroads, 2018c, p. 42)

Table 4.16-7 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. Source: HCM (6th Edition)
(Urban Crossroads, 2018c, Table 2-4)

5. Freeway Merge/Diverge Ramp Junction Analysis

The freeway system in the study area has been broken into segments defined by freeway-to-arterial interchange locations resulting in two existing on and off ramp locations. Although the HCM indicates the influence area for a merge/diverge junction is 1,500 feet, the analysis presented in this traffic study has been performed at all ramp locations with respect to the nearest on or off ramp at each interchange in an effort to be consistent with Caltrans guidance/comments on other projects Urban Crossroads has worked on in the region. (Urban Crossroads, 2018c, p. 42)

The merge/diverge analysis is based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS7 software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. Table 4.16-8, *Description of Freeway Merge and Diverge LOS*, presents the merge/diverge area level of service descriptions for each density range utilized for the analysis. (Urban Crossroads, 2018c, pp. 42-43)



Table 4.16-8 Description of Freeway Merge and Diverge LOS

Level of Service	Density Range (pc/mi/ln) ¹
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

¹ pc/mi/ln = passenger cars per mile per lane. Source: HCM (6th Edition)
(Urban Crossroads, 2018c, Table 2-5)

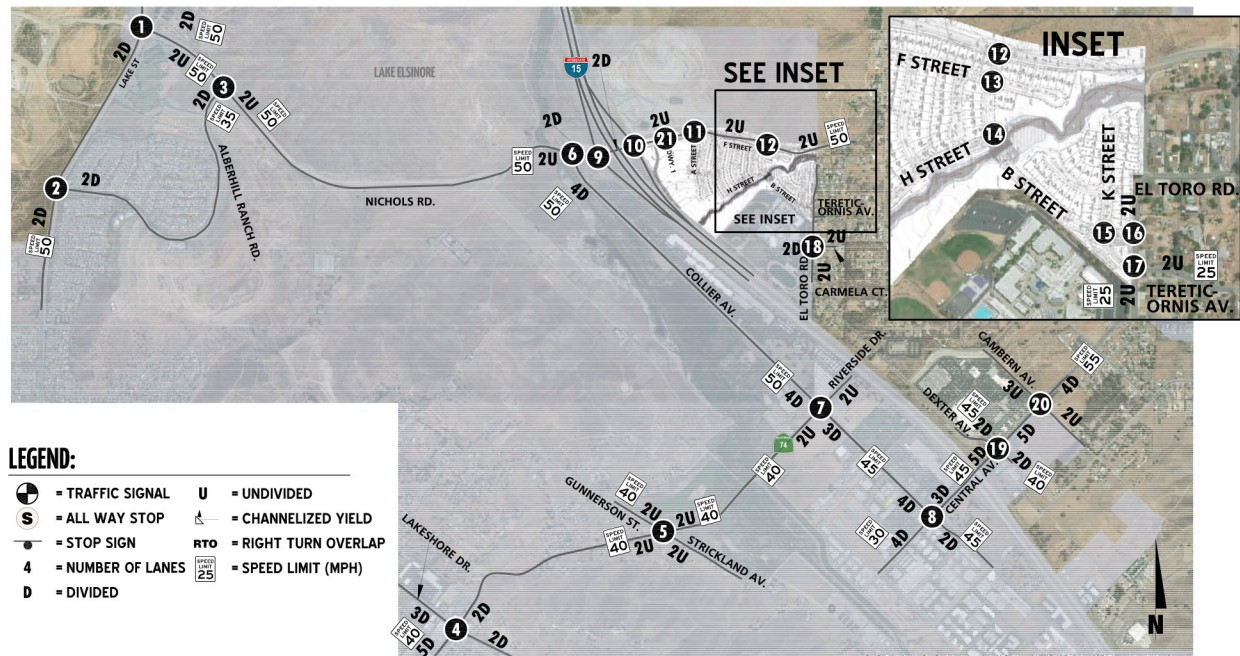
Similar to the basic freeway segment analysis, the I-15 Freeway mainline volume data were obtained from the Caltrans-maintained PeMS website for the segments of the I-15 Freeway interchange, north of Nichols Road. The ramp data (per the count data presented in Appendix 3.1 of the Project's TIA) were then utilized to flow conserve the mainline volumes to determine the remaining I-15 Freeway mainline segment volumes. Flow conservation checks ensure that traffic flows from north to south (and vice versa) of the interchange area with no unexplained loss of vehicles. The data was obtained from February 2018. In an effort to conduct a conservative analysis, the maximum value observed within the three-day period was utilized for the weekday morning (AM) and weekday evening (PM) peak hours. In addition, truck traffic, represented as a percentage of total traffic, has been utilized for the purposes of 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) have been utilized for the purposes of the freeway ramp junction (merge/diverge) analysis. (Urban Crossroads, 2018c, p. 43)

4.16.3 EXISTING CONDITIONS

The Project site is located in the northeastern portion of the City of Lake Elsinore, immediately east of Interstate 15 (I-15) and south of Nichols Road. The Project site is currently vacant and undeveloped. There are no roadways on the Project site under existing conditions, although the northern portions of the site are undergoing reclamation activities. A description of the existing circulation network in the Project area is provided below.

A. Existing Circulation Network

Pursuant to the agreement with City of Lake Elsinore staff (Appendix 1.1 to the Project's TIA, included as EIR *Technical Appendix L*), the study area includes a total of 21 intersections as shown previously on Figure 4.16-1 where the Project is anticipated to contribute 50 or more peak hour trips. Figure 4.16-2, *Existing Number of Through Lanes and Intersection Controls*, 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. (Urban Crossroads, 2018c, p. 47)



LEGEND:

- = TRAFFIC SIGNAL
- = ALL WAY STOP
- = STOP SIGN
- = NUMBER OF LANES
- = DIVIDED
- = UNDIVIDED
- = CHANNELIZED YIELD
- = RIGHT TURN OVERLAP
- = SPEED LIMIT (MPH)

1 Lake St. & Nichols Rd.	2 Lake St. & Alberhill Ranch Rd.	3 Alberhill Ranch Rd. & Nichols Rd.	4 Lakeshore Dr. & Riverside Dr. (SR-74)	5 Gunnerson St./ Strickland Av. & Riverside Dr. (SR-74)	6 Collier Av. & Nichols Rd.	7 Collier Av. & Riverside Dr. (SR-74)
8 Collier Av. & Central Av. (SR-74)	9 I-15 SB Ramps & Nichols Rd.	10 I-15 NB Ramps & Nichols Rd.	11 A Street & Nichols Rd.	12 B Street & Nichols Rd.	13 B Street & F Street	14 B Street & H Street
15 K Street & B Street	16 El Toro Rd. & B Street	17 El Toro Rd. & Tereticornis Av.	18 El Toro Rd. & Carmela Ct.	19 Dexter Av. & Central Av. (SR-74)	20 Cambern Av. & Central Av. (SR-74)	21 Driveway 1 & Nichols Rd.
Future Intersection	Future Intersection					Future Intersection

Source(s): Urban Crossroads (08-14-2018)

Figure 4.16-2

**EXISTING NUMBER OF
THROUGH LANES AND INTERSECTION CONTROLS**



NOT TO SCALE





Expressways are 8 lanes with a minimum right-of-way of 220-feet. These highways are primarily for through traffic where traffic volumes exceed six-lane capacities. Access from other streets or highways shall be limited to approximately one-quarter mile intervals. The following study area roadway within the City of Lake Elsinore is classified as an Urban Arterial Highway: (Urban Crossroads, 2018c, p. 47)

- Central Avenue (SR-74)

Urban Arterial Highways are 6 lanes with a minimum right-of-way of 120-feet. These highways are primarily for through traffic where traffic volumes exceed four-lane capacities. Access from other streets or highways shall be limited to approximately one-quarter mile intervals. The following study area roadways within the City of Lake Elsinore are classified as an Urban Arterial Highway: (Urban Crossroads, 2018c, p. 47)

- Nichols Road (between Collier Avenue and El Toro Road)
- Riverside Drive (SR-74) (between Lincoln Street and Collier Avenue)
- Lake Street

Major Highways are 4 lanes with a minimum right-of-way of 100-feet. These highways are intended to serve property zoned for major industrial and commercial uses, or to serve through traffic. Intersections with other streets or highways may be limited to approximately 660-foot intervals. The following study area roadway within the City of Lake Elsinore is classified as a Major Highway: (Urban Crossroads, 2018c, p. 53)

- Collier Avenue (between Nichols Road and Riverside Drive)
- Nichols Road (between Lake Street and Collier Avenue)

B. Existing (2018) Traffic Counts

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in February and April 2018. The following peak hours were selected for analysis: (Urban Crossroads, 2018c, p. 53)

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

The weekday AM and weekday PM peak hour count data is representative of typical weekday 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 or detour routes and near-by schools were in session and operating on normal schedules. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1 to the Project's TIA (*Technical Appendix L*). These raw turning volumes have been flow conserved between intersections with limited access, no access and where there are currently no uses generating traffic (e.g., between ramp-to-arterial intersections, etc.). (Urban Crossroads, 2018c, p. 57)

The traffic counts were collected in February and April 2018. Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Figure 4.16-3, *Existing (2018) Traffic*



Volumes. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg: (Urban Crossroads, 2018c, p. 57)

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 11.1793 = \text{Leg Volume}$$

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 8.945 percent. As such, the above equation utilizing a factor of 11.1793 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 8.945 percent (i.e., $1/0.08945 = 11.1793$) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are also shown on Figure 4.16-3. (Urban Crossroads, 2018c, p. 57)

C. 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 subsection 4.16.2 above. The intersection operations analysis results are summarized in Table 4.16-9, *Intersection Analysis for Existing (2018) Conditions*, which indicates that the following existing study area intersections are currently operating at an unacceptable LOS during the peak hours: (Urban Crossroads, 2018c, p. 57)

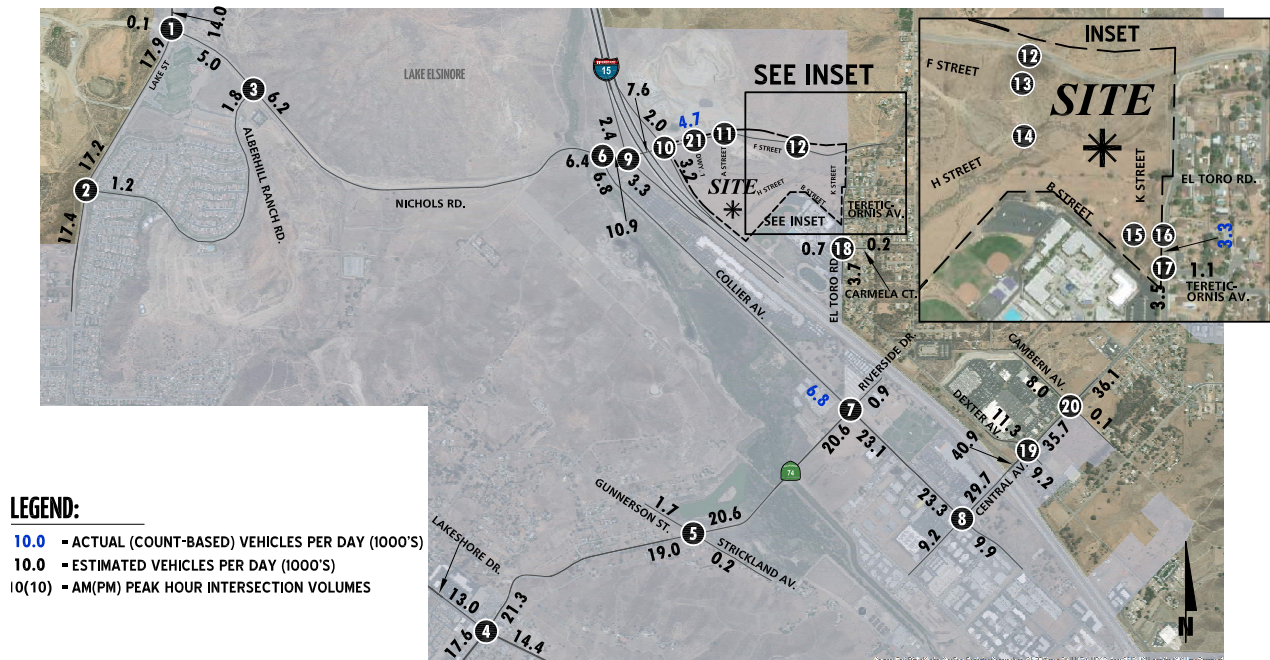
- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM peak hour only
- El Toro Road & Tereticornis Avenue (#17) – LOS F AM peak hour only
- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only

The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing PHF from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much higher in comparison to the other 15-minute periods within the hour. (Urban Crossroads, 2018c, p. 57)

Although the intersection of El Toro Road and Tereticornis Avenue is anticipated to operate at an unacceptable LOS during the AM peak hour, it is anticipated to operate at an acceptable LOS with a normalized PHF. The intersection operations analysis worksheets are included in Appendix 3.2 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 60)

D. Existing Conditions Traffic Signal Warrants Analysis

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. The following study area intersections currently warrant a traffic signal for Existing traffic conditions: (Urban Crossroads, 2018c, p. 60)



1 Lake St. & Nichols Rd. 4(1) 272(845) 38(18) 5(0) 177(227) 15(1) 4(6) 0(1) 0(1) 674(362) 347(164)	2 Lake St. & Alberhill Ranch Rd. 414(1012) 18(23) 47(19) 57(35) 1013(481) 48(30) 1013(481)	3 Alberhill Ranch Rd. & Nichols Rd. 181(237) 35(74) 359(183) 16(18) 38(9) 69(61)	4 Lakeshore Dr. & Riverside Dr. (SR-74) 9(15) 177(308) 337(298) 529(593) 129(117) 19(29) 443(476) 141(263) 266(194) 293(251) 109(156)	5 Gunnerson St./ Strickland Av. & Riverside Dr. (SR-74) 5(2) 3(1) 46(28) 35(115) 620(855) 2(6) 0(2) 827(833) 3(4) 0(0) 2(0) 11(6)	6 Collier Av. & Nichols Rd. 184(249) 93(222) 403(187) 32(54) 37(78) 91(254)	7 Collier Av. & Riverside Dr. (SR-74) 45(92) 52(178) 1(3) 2(7) 1(17) 5(20) 74(99) 10(11) 800(757) 611(867) 71(222) 10(19)
8 Collier Av. & Central Av. (SR-74) 11(31) 57(132) 757(902) 591(712) 275(191) 499(203) 29(49) 53(117) 274(336)	9 I-15 SB Ramps & Nichols Rd. 62(132) 6(2) 164(78) 215(339) 56(25) 228(239) 267(268)	10 I-15 NB Ramps & Nichols Rd. 89(39) 131(112) 74(140) 318(177) 140(252) 3(1) 108(30)	11 A Street & Nichols Rd. Future Intersection	12 B Street & Nichols Rd. Future Intersection	13 B Street & F Street Future Intersection	14 B Street & H Street Future Intersection
15 K Street & B Street Future Intersection	16 El Toro Rd. & B Street Future Intersection	17 El Toro Rd. & Tereticornis Av. 413(150) 18(48) 23(17) 166(12) 183(126) 65(24)	18 El Toro Rd. & Carmela Ct. 228(10) 343(146) 15(1) 0(0) 6(5) 129(14) 0(0) 263(29) 166(13) 104(135) 6(4)	19 Dexter Av. & Central Av. (SR-74) 372(315) 141(91) 68(67) 186(67) 1373(1112) 121(156) 227(338) 886(1617) 124(161) 99(119) 251(130) 87(168)	20 Cambern Av. & Central Av. (SR-74) 86(83) 126(230) 111(143) 1605(1119) 1(0) 123(252) 1023(1736) 1(1) 3(1) 2(3) 1(1)	21 Driveway 1 & Nichols Rd. Future Intersection

Source(s): Urban Crossroads (08-14-2018)

Figure 4.16-3



NOT TO SCALE



EXISTING (2018) TRAFFIC VOLUMES

Table 4.16-9 Intersection Analysis for Existing (2018) Conditions

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		LOS ⁴	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Lake St. & Nichols Rd.	TS	1	1	1	1	1	0	0	1	0	0	1	0	16.3	25.4	B	C
2	Lake St. & Alberhill Ranch Rd.	TS	0	1	1	1	1	0	0	0	0	1	0	1	12.4	7.4	B	A
3	Alberhill Ranch Rd. & Nichols Rd.	AWS	1	0	1	0	0	0	0	1	0	0	1	0	11.4	9.7	B	A
4	Lakeshore Dr. & Riverside Dr. (SR-74)	TS	1	2	0	1	2	1	1	2	1	1	1	1	44.9	42.5	D	D
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	CSS	0	1	1	0	1	1	0	1	0	0	1	0	81.0	120.2	F	F
6	Collier Av. & Nichols Rd.	CSS	1	0	1	0	0	0	0	1	0	1	1	0	20.5	28.9	C	D
7	Collier Av. & Riverside Dr. (SR-74)	TS	1	1	0	1	1	1	0	1	1>	0	1	0	14.9	24.7	B	C
8	Collier Av. & Central Av. (SR-74)	TS	1	1	1>	2	2	1	2	2	0	2	1	2>	34.2	33.0	C	D
9	I-15 Southbound Ramps & Nichols Rd.	AWS	0	0	0	0	1	0	0	1	1	1	1	0	15.4	13.4	C	B
10	I-15 Northbound Ramps & Nichols Rd.	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	29.9	F	D
11	A St. & Nichols Rd.		Future Intersection															
12	B St. & Nichols Rd.		Future Intersection															
13	B St. & F St.		Future Intersection															
14	B St. & H St.		Future Intersection															
15	K St. & B St.		Future Intersection															
16	El Toro Rd. & B St.		Future Intersection															
17	El Toro Rd. & Tereticornis Av.	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	10.2	F	B
	With Normalized PHF ^{5,6}	CSS	0	1	0	0	1	0	0	0	0	0	1	0	22.4	--	C	--
18	El Toro Rd. & Carmela Ct.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	>100.0	11.5	F	B
	With Normalized PHF ^{5,6}	CSS	0	1	0	0	1	0	0	1	0	0	1	0	>100.0	--	F	--
19	Dexter Av. & Central Av. (SR-74)	TS	1	1	0	1	1	1>	1	3	1	1	4	1	39.6	46.5	D	D
20	Cambern Av. & Central Av. (SR-74)	TS	1	1	0	0	1	1	2	2	0	1	2	1	26.3	27.2	C	C
21	Driveway 1 & Nichols Rd.		Future Intersection															

¹ **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

² 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; d = Defacto Right Turn Lane; > = Right Turn Overlap Phasing

³ Per the Highway Capacity Manual (6th Edition), 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.

⁴ CSS = Cross-street Stop; AWS = All-way Stop; TS = Traffic Signal

⁵ LOS = Level of Service

⁶ The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing peak hour factor from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much higher in comparison to the other 15-minute periods within the hour.

⁷ PHF = Peak Hour Factor

(Urban Crossroads, 2018c, Table 3-1)

- Collier Avenue & Nichols Road (#6)
- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 60)

E. Existing Conditions Off-Ramp Queuing Analysis

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Nichols 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-15 Freeway mainline. Queuing analysis findings are presented in Table 4.16-10, *Peak Hour Freeway Off-Ramp Queuing Summary for Existing*



(2018) Conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.16-10, there are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for Existing traffic conditions off-ramp queuing analysis are provided in Appendix 3.4 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 60)

Table 4.16-10 Peak Hour Freeway Off-Ramp Queuing Summary for Existing (2018) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet) ²		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Off-Ramp & Nichols Rd.	SBL/T/R	1,600	80	43	Yes	Yes
I-15 NB Off-Ramp & Nichols Rd.	NBL/T/R	1,530	495	128	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

² Maximum queue length for the approach reported.

(Urban Crossroads, 2018c, Table 3-2)

F. Existing Conditions Basic Freeway Segment Analysis

Existing mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibit 3-11 of the Project's TIA (*Technical Appendix L*). As shown on Table 4.16-11, *Basic Freeway Segment Analysis for Existing (2018) Conditions*, the basic freeway segments analyzed for the Project's TIA were found to operate at an acceptable LOS during the peak hours. Existing basic freeway segment analysis worksheets are provided in Appendix 3.5 of the Project's TIA. (Urban Crossroads, 2018c, p. 60)

G. Existing Conditions Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for Existing conditions and the results of this analysis are presented in Table 4.16-12, *Freeway Ramp Junction Merge/Diverge Analysis for Existing (2018) Conditions*. As shown in Table 3-4, the freeway ramp merge and diverge areas currently operate at LOS D or better. Existing freeway ramp junction operations analysis worksheets are provided in Appendix 3.6 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 60)

H. Bicycle and Pedestrian Facilities

In an effort to promote alternative modes of transportation, the City of Lake Elsinore also includes a trails and bikeway system. The trails and bikeway system, shown on TIA Exhibits 3-6 and 3-7 (*Technical Appendix L*), shows the proposed trails are connected with major features within the City and County. There is a regional trail along the east side of the I-15 Freeway and a community trail along Nichols Road within the study area. Class II bike lanes are proposed for Nichols Road within the study area. (Urban Crossroads, 2018c, p. 53)

Field observations conducted by Urban Crossroads in April 2018 indicate nominal pedestrian and bicycle activity within the study area. There are limited pedestrian and bicycle facilities within the study area. The only sidewalk provided is along Nichols Road to the west of the I-15 Freeway. (Urban Crossroads, 2018c, p. 53)



Table 4.16-11 Basic Freeway Segment Analysis for Existing (2018) Conditions

Freeway	Direction	Mainline Segment	Lanes ¹	Density ²		LOS ³	
				AM	PM	AM	PM
I-15 Freeway	Southbound	North of Nichols Rd.	3	26.7	32.4	D	D
		South of Nichols Rd.	3	27.4	33.2	D	D
	Northbound	North of Nichols Rd.	3	21.9	16.7	C	B
		South of Nichols Rd.	3	22.4	17.1	C	B

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

(Urban Crossroads, 2018c, Table 3-3)

Table 4.16-12 Freeway Ramp Junction Merge/Diverge Analysis for Existing (2018) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway ¹	AM Peak Hour		PM Peak Hour	
				Density ²	LOS ³	Density ²	LOS ³
I-15 Freeway	Southbound	Off-Ramp at Nichols Rd.	3	27.2	D	31.2	D
		On-Ramp at Nichols Rd.	3	29.5	C	34.3	D
	Northbound	On-Ramp at Nichols Rd.	3	24.1	C	18.5	B
		Off-Ramp at Nichols Rd.	3	23.7	C	18.4	C

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

(Urban Crossroads, 2018c, Table 3-4)

I. Transit Service

The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region. There are currently no existing bus routes that serve the roadways within the study area in close proximity to the proposed Project (see TIA Exhibit 3-8, included as EIR *Technical Appendix L*). The closest transit lines run along the I-15 Freeway, Nichols Road to the west of the I-15 Freeway, Collier Avenue, Riverside Avenue (SR-74), and Central Avenue (SR-74). Transit service is



reviewed and updated by RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. (Urban Crossroads, 2018c, p. 53)

4.16.4 APPLICABLE REGULATORY REQUIREMENTS

A. SCAG Regional Transportation Plan

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code § 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). The Project site is within SCAG's regional authority. On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS)* with goals to: 1) Align the plan investments and policies with improving regional economic development and competitiveness; 2) Maximize mobility and accessibility for all people and goods in the region; 3) Ensure travel safety and reliability for all people and goods in the region; 4) Preserve and ensure a sustainable regional transportation system; 5) Maximize the productivity of our transportation system; 6) Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking); 7) Actively encourage and create incentives for energy efficiency, where possible; 8) Encourage land use and growth patterns that facilitate transit and active transportation; and 9) Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies (SCAG, 2016). Performance measures and funding strategies also are included to ensure that the adopted goals are achieved through implementation of the RTP.

B. County of Riverside Congestion Management Program

The Riverside County Transportation Commission (RCTC) adopted its current Congestion Management Plan (CMP) in December 2011. The purpose of the CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Additionally, the CMP establishes a minimum LOS of E for CMP roadway facilities within Riverside County. (RCTC, 2011, p. ES-1) There are two CMP facilities within the Project's study area: I-15 and State Route 74 (SR-74). As indicated in Table 4.16-1, there are eight study area intersections that are identified as Riverside County CMP facilities. These intersections are listed below (Urban Crossroads, 2018c, Table 1-1):

- Lakeshore Dr. and Riverside Dr. (SR-74) (#4)
- Gunnerson St./Strickland Av. Ant Riverside Drive (SR-74) (#5)
- Collier Av. And Riverside Dr. (SR-74) (#7)
- Collier Av. And Central Av. (SR-74) (#8)
- I-15 Southbound Ramps and Nichols Road (#9)
- I-15 Northbound Ramps and Nichols Road (#10)
- Dexter Av. And Central Av. (SR-74) (#19)
- Cambern Av. And Central Av (SR-74) (#20)



C. City of Lake Elsinore General Plan Circulation Element

As noted previously, the Project site is located within the City of Lake Elsinore. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area are identified by the City of Lake Elsinore General Plan Circulation Element and Riverside County General Plan Circulation Element. Exhibit 3-2 of the Project's TIA (*Technical Appendix L*) shows the City of Lake Elsinore General Plan Circulation Element, and TIA Exhibit 3-3 illustrates the City of Lake Elsinore General Plan roadway cross-sections. TIA Exhibit 3-4 shows the Riverside County General Plan Circulation Element, and TIA Exhibit 3-5 illustrates the Riverside County General Plan roadway cross-sections.

D. Western Riverside County Association of Governments Transportation Uniform Mitigation Fee

The Western Riverside Council of Governments (WRCOG) established a consolidated Transportation Uniform Mitigation Fee (TUMF) program for all of western Riverside County, which commenced in 2003. The establishment of TUMF was based on the desire to establish a single, uniform fee program to mitigate the cumulative impacts of new development on the sub-region's arterial highway system rather than having multiple and potentially uncoordinated fee programs across the region. WRCOG is responsible for establishing and updating TUMF payment rates, based on a TUMF Program Nexus Study, which is periodically updated to consider the impact of future development on the subregion's system of highways and arterial roads. Between 2003 when TUMF commenced and June 30, 2016, WRCOG had received \$686,720,128 in revenues through the TUMF program. The City of Lake Elsinore is located in the TUMF's Southwest Zone, along with the cities of Canyon Lake, Murrieta, Temecula, and Wildomar, and parts of unincorporated Riverside County. Between 2003 and June 2016 the Southwest Zone received \$218,623,188 in revenues through the TUMF program, of which projects in the City of Lake Elsinore are reported to have contributed \$21,090,079. (WRCOG, 2016, p. 12) During this time, 88 TUMF-funded improvements have been completed and 44 projects are underway which demonstrates that TUMF is an effective program (WRCOG, 2016, p. 17). To-date, 13 TUMF-funded projects are included in the adopted Transportation Improvement Plan (TIP), of which four are in the planning stage, two are in the engineering stage, and four projects are under construction, and three projects have been completed, which represent \$27 million in TUMF investment. (WRCOG, 2016, pp. 44, 55)

WRCOG is responsible for establishing and updating Transportation Uniform Mitigation Fee (TUMF) rates. The County may grant to developers a credit against the specific components of fees for the dedication of land or the construction of facilities identified in the list of improvements funded by each of these fee programs. Fees are based upon projected land uses and a related transportation needs to address growth based upon a 2016 Nexus study update. Payment of TUMF fees, as well as exemptions, credits, reimbursements, and local administration is deferred to local government agencies. WRCOG serves this function for the City of Lake Elsinore. (Urban Crossroads, 2018c, p. 24)

Table 1-4 of the Project's TIA (*Technical Appendix L*), *Summary of Improvements by Analysis Scenario*, provides a summary of improvements that are programmed to be funded by TUMF within the Project's study area.



E. City of Lake Elsinore Traffic Infrastructure Fee (TIF) Program

The City of Lake Elsinore has created its own local Traffic Infrastructure Fee (TIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City of Lake Elsinore's TIF program includes facilities that are not part of, or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City of Lake Elsinore's TIF program, the City of Lake Elsinore may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the TIF program. (Urban Crossroads, 2018c, p. 28)

The timing to use the TIF fees is established through periodic capital improvement programs which are overseen by the City of Lake Elsinore's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City of Lake Elsinore are also periodically performed by City of Lake Elsinore staff and consultants. The City of Lake Elsinore uses this data to determine the timing of implementing the improvements listed in its facilities list. (Urban Crossroads, 2018c, p. 28)

As shown in Table 1-4 of the Project's TIA (*Technical Appendix L*), a few of the facilities forecasted to be impacted by the Project are planned for improvements through the City of Lake Elsinore's TIF Program. The Project would be subject to the City of Lake Elsinore's TIF fee program, and would pay the requisite City of Lake Elsinore TIF fees at the rates then in effect pursuant to the City of Lake Elsinore's ordinance. The TIF network improvement needs were last updated in 2002 with an expected completion date by 2025. Improvements are identified in the Nexus Study by location rather than with specific geometrics. Table E of that study identifies TIF improvement locations and eligible program costs but does not provide discrete improvements. As a result, Table 1-4 of the TIA identifies TIF intersections with an expectation that City of Lake Elsinore, as program administrator, can distinguish if the program fees are sufficient to cover the fair-share impacts for proportionality. (Urban Crossroads, 2018c, p. 28)

4.16.5 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to transportation and traffic if the Project or any Project-related component would:

- a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, and pedestrian facilities;*
- b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;*
- c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or*
- d. Result in inadequate emergency access.*



The above listed thresholds are derived directly from Section XVII of Appendix G to the CEQA Guidelines and address typical adverse effects to transportation and traffic (OPR, 2018).

4.16.6 DETERMINING SIGNIFICANCE OF IMPACTS

A. Minimum Level of Service (LOS)

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions and are described below. (Urban Crossroads, 2018c, p. 43)

1. City of Lake Elsinore

The City, pursuant to its 2011 General Plan, requires that peak hour intersection operations be at LOS D or better to be considered acceptable. Therefore, City intersections operating at LOS E or F would be considered deficient. (Urban Crossroads, 2018c, p. 43)

2. County of Riverside

Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS: (Urban Crossroads, 2018c, p. 44)

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/Meniffee 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.

3. Caltrans

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on SHS facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than this target LOS, the existing LOS should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadway segments, and intersections is LOS D. Consistent with the City of Lake Elsinore LOS threshold of LOS D and in excess of the Riverside County Congestion Management Program (CMP) stated LOS threshold of LOS E, LOS D will be used as the target LOS for freeway ramps, freeway segments, and freeway merge/diverge ramp junctions. (Urban Crossroads, 2018c, p. 44)

B. Deficiency Criteria

Provided below is a summary of the methodology used in this analysis related to identifying circulation system deficiencies (Urban Crossroads, 2018c, p. 44).

1. Intersections

The following types of traffic deficiencies are considered to be significant under the California Environmental Quality Act (CEQA): (Urban Crossroads, 2018c, p. 45)

- When existing traffic conditions exceed the General Plan target LOS (e.g., LOS D or better). In such a case, the addition of Project traffic would be considered a cumulatively-considerable impact.
- When Project traffic, when added to existing and ambient traffic, will deteriorate the LOS to below the target LOS. In such cases, the Project impacts would be considered direct impacts.
- When ambient and/or cumulative traffic exceeds the target LOS with or without Project traffic. In such a case, the Project's impacts would be cumulatively-considerable.

2. Caltrans Facilities

To determine whether the addition of project traffic to the SHS freeway segments would result in a deficiency, the following will be utilized (Urban Crossroads, 2018c, p. 45):

- The analysis finds that the LOS of a segment will degrade from D or better to E or F.
- The analysis finds that the project will exacerbate an already deficient condition by contributing 50 or more peak hour trips. A segment that is operating at or near capacity is deemed to be deficient.

C. Project Fair Share Calculation Methodology

In cases where the analysis identifies that the proposed Project would have a significant cumulative impact to a roadway facility, and the recommended mitigation measure is a fair-share monetary contribution, the following methodology was applied to determine the fair share contribution. A project's fair share contribution at an off-site study area intersection is determined based on the following equation, which is the ratio of project



traffic to new traffic, and new traffic is total future traffic subtracts existing baseline traffic: (Urban Crossroads, 2018c, p. 45)

$$\text{Project Fair Share \%} = \text{Project Traffic} / (\text{EAPC 2024 Total Traffic} - \text{Existing Baseline Traffic})$$

The Project fair share contribution calculations are presented in Section 1.5, *Local and Regional Funding Mechanisms*, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 45)

4.16.7 IMPACT ANALYSIS

Threshold a. Would the Project conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, and pedestrian facilities?

The analysis of Threshold a. focuses on potential impacts to local roadway intersections and roadway segments, based on acceptable LOS standards established by the City of Lake Elsinore and the County of Riverside as discussed in subsection 4.16.6. The analysis in this section also includes an evaluation of potential impacts to facilities under the jurisdiction of Caltrans, which include potential impacts to ramp junctions with the I-15. Traffic during the Project's construction phase is not analyzed herein because based on the construction characteristics identified in EIR Subsection 3.0, *Project Description*, the volume of construction-related traffic would result in fewer peak hour and daily trips than would result from any phase of the Project; thus, the analyses of the Project's operational traffic covers any impacts that could occur from construction-related traffic.

A. Analysis Scenarios

For the purposes of analysis, potential impacts to traffic and circulation have been assessed for each of the following conditions: (Urban Crossroads, 2018c, p. 3)

- Existing (2018) Conditions (Baseline)
- Existing plus Phase 1 Project (E+P) Conditions
- Existing plus Phase 2 Project (E+P) Conditions
- Existing plus Project Buildout (E+P) Conditions
- Existing plus Ambient Growth (EA) (2020) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2020) Conditions
- Existing plus Ambient Growth (EA) (2021) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2021) Conditions
- Existing plus Ambient Growth (EA) (2024) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2024) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2020) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2021) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2024) Conditions

The Existing plus Project (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 has also been provided for informational purposes only as Project impacts have been discerned from a comparison of Existing (2018) to EAP (2020), EAP (2021), and EAP (2024) traffic conditions (per the County's traffic study guidelines). This is because it is not realistic to assume that the Project would contribute traffic to study area facilities under existing (2018) conditions as the Project would not be operational until 2020 (Phase 1), 2021 (Phase 2), and 2024 (Phase 3). (Urban Crossroads, 2018c, p. 3)

The Existing plus Ambient Growth (EA) conditions includes 4.04% (for 2020 conditions), 6.12% (for 2021 conditions), and 12.62% (for 2024 conditions) of ambient growth traffic. Cumulative development projects are not included as part of the EA analysis. (Urban Crossroads, 2018c, p. 3)

The Existing plus Ambient Growth plus Project (EAP) conditions analysis determines the cumulative traffic impacts based on a comparison of the EAP traffic conditions to EA conditions (i.e., baseline conditions). To account for background traffic growth, ambient growth from Existing conditions of 4.04% (for 2020 conditions), 6.12% (for 2021 conditions), and 12.62% (for 2024 conditions) are included for EAP traffic conditions. Cumulative development projects are not included as part of the EAP analysis. (Urban Crossroads, 2018c, p. 4)

The Existing plus Ambient Growth plus Project plus Cumulative (EAPC) conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as TUMF and the City's TIF, or other approved funding mechanism can accommodate the near-term cumulative traffic at the target level of service (LOS) identified in the City of Lake Elsinore General Plan. If the "funded" improvements can provide the target LOS, then the Project's payment into TUMF and/or TIF will be considered as near-term cumulative mitigation through the conditions of approval. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF facilities) are identified as such. To account for background traffic, other known cumulative development projects in the study area were included in addition to 4.04% (for 2020 conditions), 6.12% (for 2021 conditions), and 12.62% (for 2024 conditions) of ambient growth for EAPC traffic conditions in conjunction with traffic associated with the proposed Project. (Urban Crossroads, 2018c, p. 4)

As discussed in subsection 4.1.3 and Table 4-4 of the Project's TIA (*Technical Appendix L*), the proposed Project is anticipated to generate fewer trips than the currently approved land use (commercial retail) or less than 50 peak hour trips over the trip generation for the currently approved land use. As such, Horizon Year traffic conditions were not required to be evaluated and were not evaluated in the Project's TIA. (Urban Crossroads, 2018c, p. 3)

B. Traffic Modeling Inputs

1. Project Trip Generation

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development. (Urban Crossroads, 2018c, p. 69)



For purposes of the traffic analysis the Project will be evaluated in 3 phases, with Phase 1 having a projected Opening Year of 2020, Phase 2 having a project Opening Year of 2021, and Project Buildout anticipated to occur in 2024. Land uses assumed for each phase are described below. (Urban Crossroads, 2018c, p. 69)

- Phase 1 (2020): 34 low-medium density residential dwelling units
- Phase 2 (2021): Phase 1 (2020) development plus 134 additional low-medium density residential dwelling units (buildout of residential) and an 8.3-acre park
- Phase 3 (2024): Phase 1 (2020) and Phase 2 (2021) development plus 6,000 square feet (sf) of fast-food restaurant with drive-through window use, 9,400 sf of high turnover (sit-down) restaurant use, 8,000 sf of health and fitness club use, 43,000 sf of office use, 5,500 sf of fast food without drive-through, a 16-vehicle fueling position gas station with convenience store and car wash, and 130-room hotel

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 for the following ITE land use codes (Urban Crossroads, 2018c, p. 69):

- Single Family Detached Residential (ITE Code 210)
- Hotel (ITE Code 310)
- Park (ITE Code 411)
- Health & Fitness Club (ITE Code 492)
- General Office (ITE Code 710)
- Shopping Center (ITE Code 820)
- High Turnover (Sit-Down) Restaurant (ITE Code 932)
- Fast Food without Drive-Through (ITE Code 933)
- Fast Food with Drive-Through (ITE Code 934)
- Gasoline/Service Station with Convenience Market (ITE Code 945)

Table 4-1 of the Project's TIA (*Technical Appendix L*) presents the trip generation rates for these land uses. Table 4.16-13, *Project Trip Generation Summary*, summarizes the trip generation based on the mix of land uses proposed for the Project. As the Project is proposed to include shopping center and gas station uses, pass-by percentages have been obtained from Tables F.9, F.37, and F.38 of the ITE Trip Generation Handbook (3rd Edition, 2014). Patrons of the hotel and future residents may also visit other uses on-site, including the gas station and retail uses, without leaving the site. The ITE Trip Generation Handbook has been utilized to determine the internal capture for the proposed mix of uses, for each phase of development. (Urban Crossroads, 2018c, p. 70)

Internal capture is a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site. In other words, trips may be made between individual retail uses on-site and can be made either by walking or using internal roadways without using external streets. As the trip generation for the site was conservatively estimated based on individual land uses as opposed to the overall ITE Shopping Center rate, an internal capture reduction of 10% was applied to recognize the interactions that would occur between the various complimentary land uses. As shown on Table 7.1 of the



ITE Trip Generation Handbook, the internal capture percentage between retail-to-retail land uses is approximately 29% during the weekday mid-day peak hour and approximately 20% during the weekday PM peak hour. The internal capture reduction percentage applied has been reviewed and approved by City staff. (Urban Crossroads, 2018c, p. 70)

Table 4.16-13 Project Trip Generation Summary

Land Use	Quantity	Units ¹	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Phase 1 (2020)									
Single Family Detached Residential	34	DU	7	19	26	22	13	35	321
Phase 1 Total:			7	19	26	22	13	35	321
Phase 2 (2021)									
Single Family Detached Residential	168	DU	32	94	126	105	62	167	1,586
Park	8.3	AC	1	1	2	1	1	2	7
Phase 2 Total:			33	95	128	106	63	169	1,593
Project Buildout (2024)									
Single Family Detached Residential	168	DU	32	94	126	105	62	167	1,586
Park	8.3	AC	1	1	2	1	1	2	7
Internal Capture:			-3	-22	-25	-25	-20	-45	0
Residential Subtotal:			30	73	103	81	43	124	1,593
Hotel	130	Rooms	37	26	63	40	39	79	1,087
Internal Capture:			-1	-8	-9	-17	-13	-30	-413
Hotel Subtotal:			36	18	54	23	26	49	674
Fast Food With Drive-Through	6.000	TSF	123	118	241	102	94	196	2,826
Internal Capture:			-14	-6	-21	-17	-22	-39	-564
Pass-By (49% AM, 50% PM/Daily):			-55	-55	-110	-36	-36	-72	-1,131
Fast Food Without Drive-Through	5.500	TSF	83	55	138	78	78	156	1,904
Internal Capture:			-10	-4	-14	-11	-15	-26	-321
Pass-By (49% AM, 50% PM/Daily):			-25	-25	-50	-31	-31	-62	-791
High Turnover (Sit-Down) Restaurant	9.400	TSF	51	42	93	57	35	92	1,054
Internal Capture:			-5	-2	-8	-6	-8	-15	-167
Pass-By (43% PM/Daily):			0	0	0	-11	-11	-22	-381
Restaurant Subtotal:			148	122	270	125	83	208	2,428
Commercial Retail	4.400	TSF	95	59	154	26	28	54	719
Internal Capture:			-15	-11	-26	-19	-17	-36	-479
Pass-By (34% PM/Daily):			0	0	0	-2	-2	-4	-81
Health & Fitness Club	8.000	TSF	5	5	10	16	12	28	276
Gas Station w/ Market & Carwash	16	VFP	162	162	324	179	179	358	3,171
Pass-By (62% am, 56% PM/Daily):			-100	-100	-200	-100	-100	-200	-1,776
Retail Subtotal:			147	115	262	100	100	200	1,829
General Office	43.000	TSF	58	9	67	8	43	51	468
Internal Capture:			-14	-8	-22	-5	-5	-10	-92
Office Subtotal:			44	1	45	3	38	41	376
Project Buildout Total:			405	329	734	332	290	622	6,901

¹ DU = Dwelling Units; TSF = thousand square feet; VFP = Vehicle Fueling Position; AC = Acres

(Urban Crossroads, 2018c, Table 4-2)

As shown in Table 4.16-13, the Project is estimated to generate a net total of 6,900 trip-ends per day on a typical weekday with approximately 734 AM peak hour trips and 622 PM peak hour trips. (Urban Crossroads, 2018c, p. 70)



2. **Project Trip Distribution**

The Project trip distribution patterns were developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the regional arterial and state highway system. Project travel patterns were derived for each of the proposed land uses. Figure 4.16-4, *Residential Project Buildout Trip Distribution*, shows the residential trip distribution patterns for the Project for Phase 1, Phase 2, and Project Buildout. B Street would be fully constructed by the Project in Phase 1. Therefore, it is unlikely that existing through traffic would continue to utilize El Toro Road to access Nichols Road once B Street provides direct access to Nichols Road. As such, for the purposes of this analysis, 50 percent of the through traffic on El Toro Road would divert and use B Street to access Nichols Road, once available. The trip distribution for Phase 2 includes the buildout of A Street to Nichols Road. (Urban Crossroads, 2018c, p. 74)

Figure 4.16-5, *Commercial Buildout Trip Distribution*, shows the retail trip distribution patterns for the Project which will be utilized for the shopping center, office, and gas station uses. Figure 4.16-6, *Hotel Buildout Trip Distribution*, shows the hotel trip distribution patterns for the Project. Figure 4.16-5 and Figure 4.16-6 will be utilized for Project buildout conditions only, as both the commercial and hotel uses would be developed as part of the third phase of the proposed Project. (Urban Crossroads, 2018c, p. 74)

3. **Modal Split**

The traffic reducing potential of public transit, walking, or bicycling have not been considered in the Project's TIA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes. (Urban Crossroads, 2018c, p. 74)

4. **Project Trip Assignment**

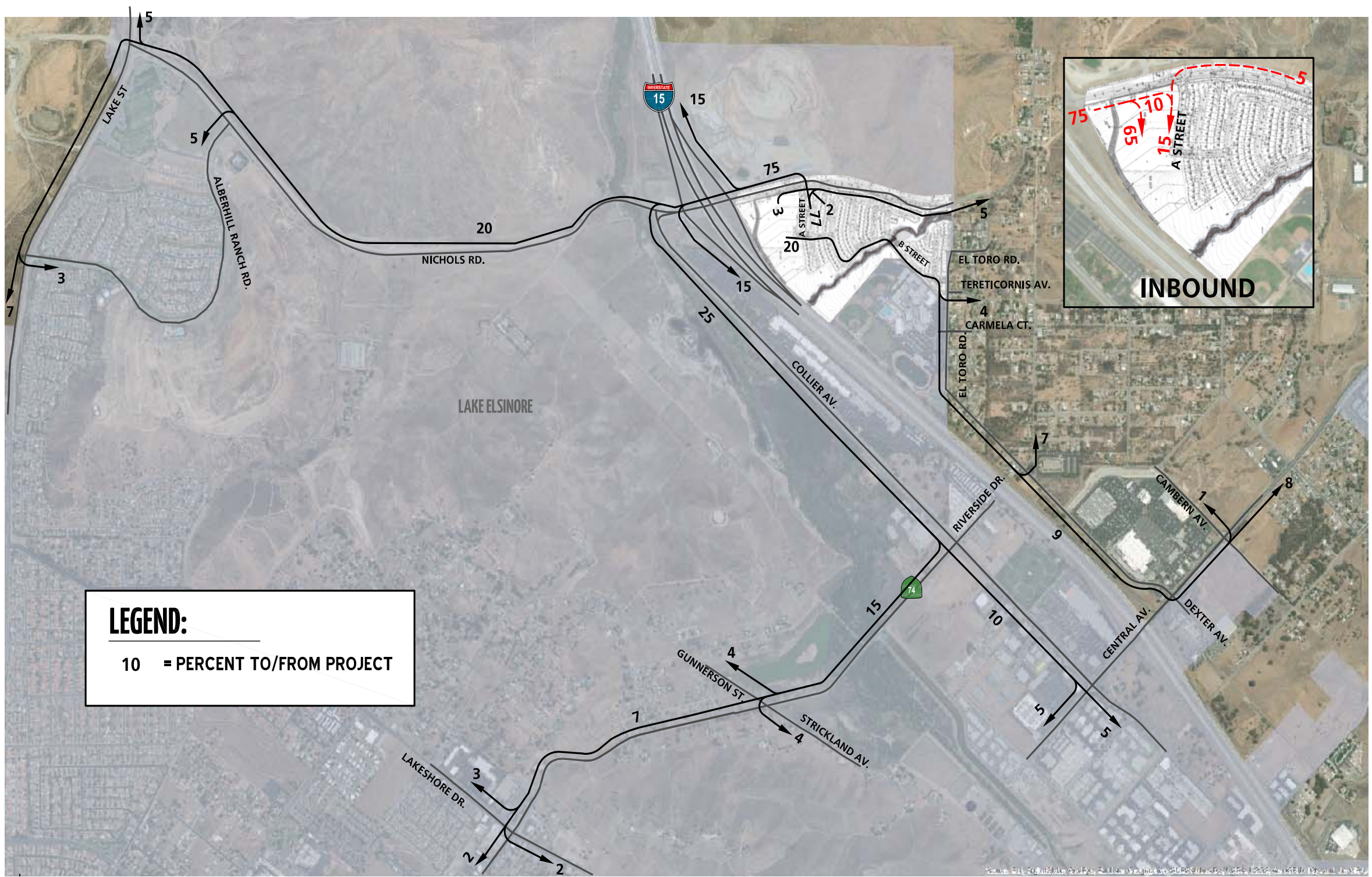
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project (Phase 1) ADT and peak hour intersection turning movement volumes are shown on Figure 4.16-7, *Project Only (Phase 1) Traffic Volumes*. Project (Phase 2) ADT and peak hour intersection turning movement volumes are shown on Figure 4.16-8, *Project Only (Phase 2) Traffic Volumes*. Project (Buildout) ADT and peak hour intersection turning movement volumes are shown on Figure 4.16-9, *Project Only (Buildout) Traffic Volumes*. (Urban Crossroads, 2018c, p. 74)

5. **Cumulative Development Traffic**

The 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 City of Lake Elsinore. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections. The cumulative projects provided by the City of Lake Elsinore are provided in Appendix 4.1 of the Project's TIA (*Technical*

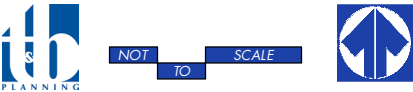


Figure 4.16-4



Source(s): Urban Crossroads (08-14-2018)

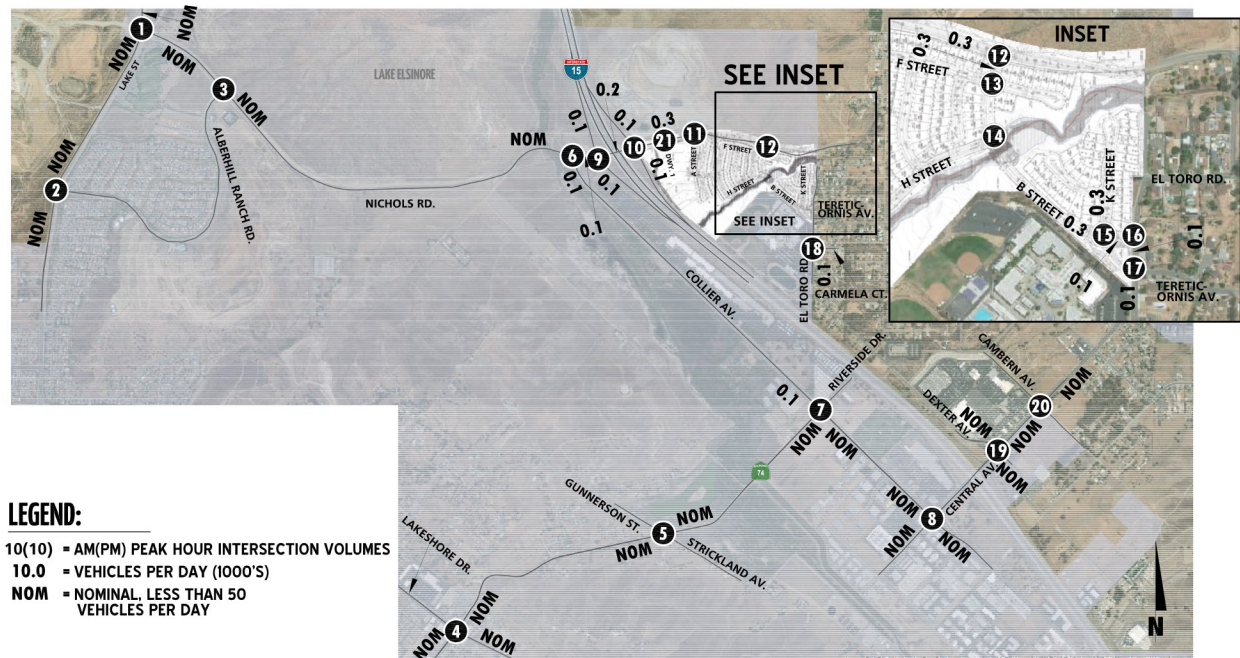
Figure 4.16-5



COMMERCIAL BUILDOUT TRIP DISTRIBUTION



Figure 4.16-6



1 Lake St. & Nichols Rd. 	2 Lake St. & Alberhill Ranch Rd. 	3 Alberhill Ranch Rd. & Nichols Rd. 	4 Lakeshore Dr. & Riverside Dr. (SR-74) 	5 Gunnerson St./ Strickland Av. & Riverside Dr. (SR-74) 	6 Collier Av. & Nichols Rd. 	7 Collier Av. & Riverside Dr. (SR-74)
8 Collier Av. & Central Av. (SR-74) 	9 I-15 SB Ramps & Nichols Rd. 	10 I-15 NB Ramps & Nichols Rd. 	11 A Street & Nichols Rd. Future Intersection 	12 B Street & Nichols Rd. 	13 B Street & F Street Future Intersection 	14 B Street & H Street Future Intersection
15 K Street & B Street 	16 El Toro Rd. & B Street 	17 El Toro Rd. & Tereticornis Av. 	18 El Toro Rd. & Carmela Ct. 	19 Dexter Av. & Central Av. (SR-74) 	20 Cambern Av. & Central Av. (SR-74) 	21 Driveway 1 & Nichols Rd. Future Intersection

Source(s): Urban Crossroads (08-14-2018)

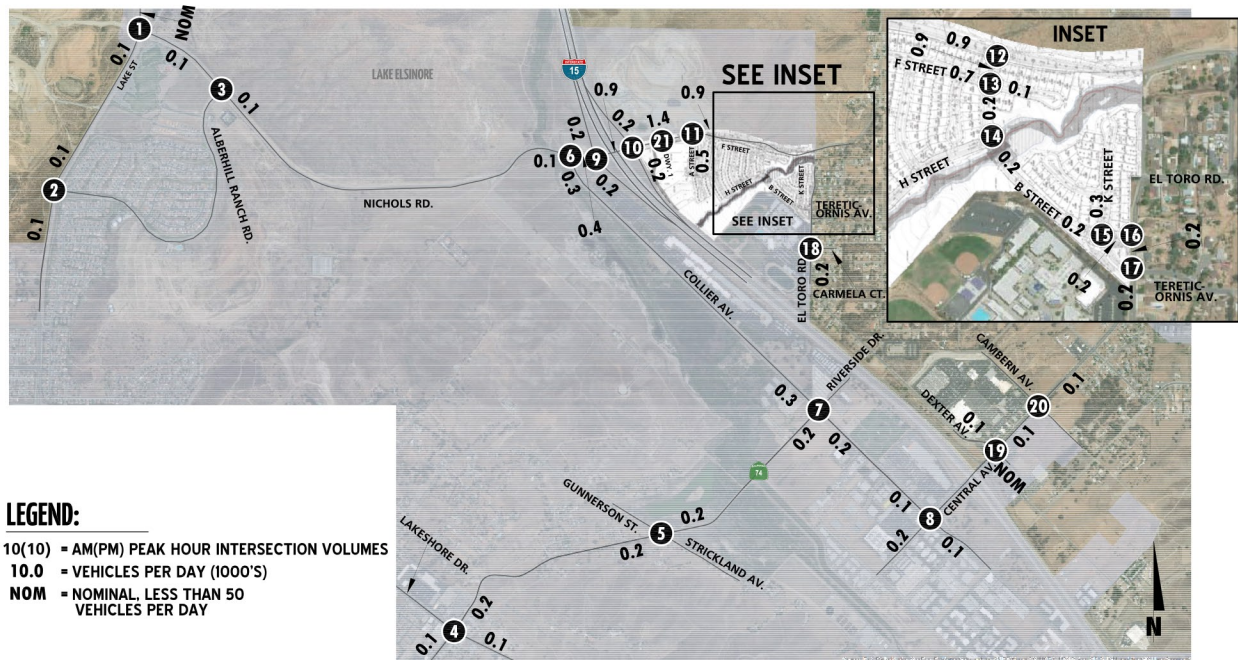
Figure 4.16-7



NOT TO SCALE



PROJECT ONLY (PHASE 1) TRAFFIC VOLUMES



1 Lake St. & Nichols Rd. 	2 Lake St. & Alberhill Ranch Rd. 	3 Alberhill Ranch Rd. & Nichols Rd. 	4 Lakeshore Dr. & Riverside Dr. (SR-74) 	5 Gunnerson St. / Strickland Av. & Riverside Dr. (SR-74) 	6 Collier Av. & Nichols Rd. 	7 Collier Av. & Riverside Dr. (SR-74)
8 Collier Av. & Central Av. (SR-74) 	9 I-15 SB Ramps & Nichols Rd. 	10 I-15 NB Ramps & Nichols Rd. 	11 A Street & Nichols Rd. 	12 B Street & Nichols Rd. 	13 B Street & F Street 	14 B Street & H Street
15 K Street & B Street 	16 El Toro Rd. & B Street 	17 El Toro Rd. & Tereticornis Av. 	18 El Toro Rd. & Carmela Ct. 	19 Dexter Av. & Central Av. (SR-74) 	20 Cambern Av. & Central Av. (SR-74) 	21 Driveway 1 & Nichols Rd.

Source(s): Urban Crossroads (08-14-2018)

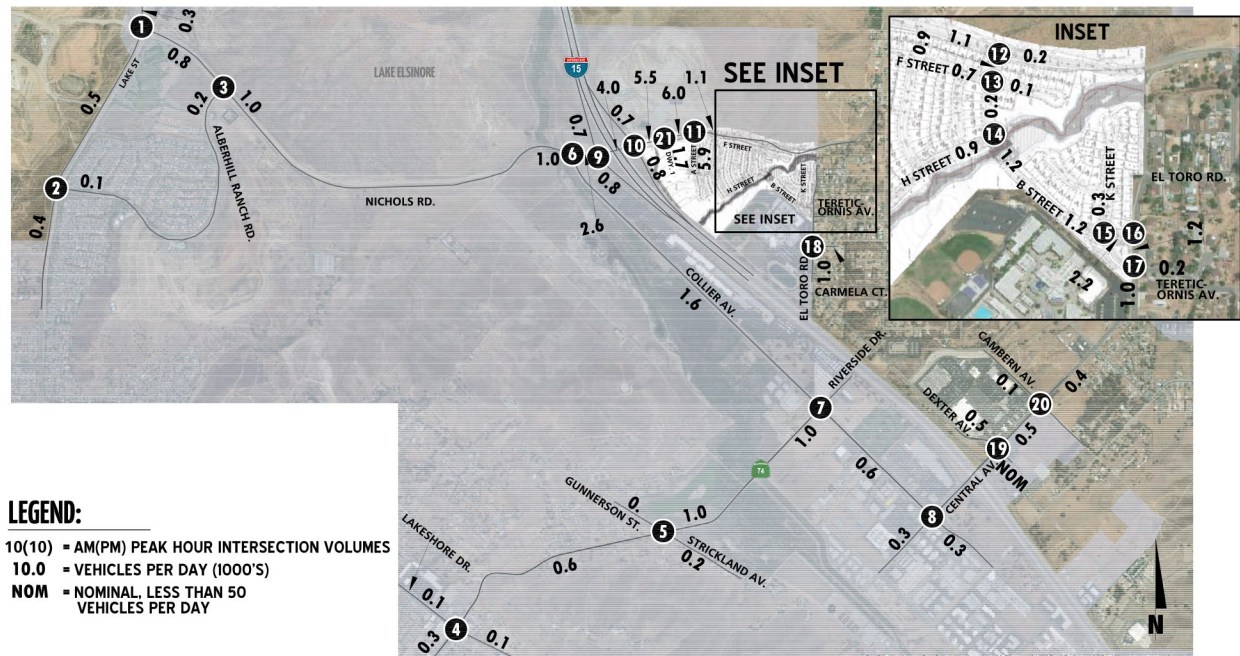
Figure 4.16-8



NOT TO SCALE



PROJECT ONLY (PHASE 2) TRAFFIC VOLUMES



1 Lake St. & Nichols Rd. 0(0) 0(0) 0(0) 0(0) 0(0) 0(0) 13(12) 18(13) 27(24) 35(27) 0(0) 0(0) 0(0) 0(0)	2 Lake St. & Alberhill Ranch Rd. 20(18) 7(7) 10(7) 0(0) 25(20) 0(0) 0(0) 0(0)	3 Alberhill Ranch Rd. & Nichols Rd. 41(36) 12(11) 53(40) 0(0) 0(0) 0(0) 0(0) 0(0)	4 Lakeshore Dr. & Riverside Dr. (SR-74) 7(7) 13(11) 7(6) 0(0) 0(0) 0(0) 0(0) 0(0)	5 Gunnerson St./ Strickland Av. & Riverside Dr. (SR-74) 10(9) 27(24) 10(9) 0(0) 0(0) 0(0) 0(0) 0(0)	6 Collier Av. & Nichols Rd. 53(47) 75(67) 70(51) 0(0) 0(0) 0(0) 0(0) 0(0)	7 Collier Av. & Riverside Dr. (SR-74) 46(41) 30(26) 0(0) 0(0) 59(46) 0(0) 0(0) 0(0)
8 Collier Av. & Central Av. (SR-74) 15(13) 15(13) 0(0) 0(0) 18(15) 0(0) 0(0) 0(0)	9 I-15 SB Ramps & Nichols Rd. 0(0) 0(0) 128(114) 72(67) 165(126) 0(0) 0(0) 0(0)	10 I-15 NB Ramps & Nichols Rd. 64(55) 195(173) 0(0) 238(193) 0(0) 0(0) 0(0) 0(0)	11 A Street & Nichols Rd. 40(24) 17(11) 39(385) 5(4) 126(122) 39(11) 126(122) 5(4)	12 B Street & Nichols Rd. 17(11) 0(0) 12(11) 17(45) 40(24) 0(0) 0(0) 0(0)	13 B Street & F Street 12(32) 4(3) 0(0) 1(0) 29(17) 0(0) 0(0) 0(0)	14 B Street & H Street 0(0) 7(10) 0(0) 48(44) 68(46) 9(8) 0(0) 0(0)
15 K Street & B Street 7(4) 3(8) 69(50) 3(8) 51(46) 0(0) 0(0) 0(0)	16 El Toro Rd. & B Street 0(0) 0(0) 162(95) -90(37) 59(51) 0(0) 0(0) 0(0)	17 El Toro Rd. & Tereticornis Av. 49(42) 10(9) 14(9) 0(0) 59(49) 0(0) 0(0) 0(0)	18 El Toro Rd. & Carmela Ct. 0(0) 0(0) 0(0) 0(0) 0(0) 0(0) 0(0) 0(0)	19 Dexter Av. & Central Av. (SR-74) 31(23) 0(0) 0(0) 0(0) 0(0) 0(0) 0(0) 0(0)	20 Cambern Av. & Central Av. (SR-74) 0(0) 28(21) 0(0) 0(0) 2(2) 21(19) 0(0) 0(0)	21 Driveway 1 & Nichols Rd. 79(49) -37(-13) 354(276) 7(7) 0(0) 0(0) 0(0) 0(0)

Source(s): Urban Crossroads (08-14-2018)

Figure 4.16-9



NOT TO SCALE



PROJECT ONLY (BUILDOUT) TRAFFIC VOLUMES



Appendix L) and are presented in EIR Table 4.0-1. In addition, the County of Riverside was also contacted to obtain near-by cumulative projects that could potentially contribute traffic at the study area intersections. (Urban Crossroads, 2018c, p. 82)

Where applicable, cumulative projects anticipated to contribute measurable traffic (i.e. 50 or more peak hour trips) to study area intersections have been manually added to the study area network to generate EAPC forecasts. In other words, the list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). For the purposes of this analysis, the cumulative projects that were determined to affect one or more of the study area intersections were previously depicted in EIR Figure 4.0-1 and previously listed in EIR Table 4.0-1. (Urban Crossroads, 2018c, p. 82)

For the purposes of this analysis, absorption percentages have been applied to the cumulative development traffic. It is unlikely that each cumulative development project shown on EIR Figure 4.0-1 will be fully constructed and occupied by the years 2020, 2021, and 2024. As such, 10% of the cumulative development traffic is added on top of EAP (2020) traffic volumes, 15% of the cumulative development traffic is added on top of EAP (2021) traffic volumes, and 30% of cumulative development traffic is added on top of EAP (2024) traffic volumes. (Urban Crossroads, 2018c, p. 82)

6. Background Traffic

Future year traffic forecasts have been based upon background (ambient) growth at 4.04% for 2020, 6.12% for 2021, and 12.62% for 2024 conditions traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. (Urban Crossroads, 2018c, p. 82)

The currently adopted SCAG 2012 RTP/SCS (April 2016) growth forecasts for the City of Lake Elsinore identifies projected growth in population of 54,100 in 2012 to 111,400 in 2040, or a 105.91 percent increase over the 28-year period. The change in population equates to roughly a 2.61 percent growth rate compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 130.26 percent, or 3.02 percent annual growth rate. Finally, growth in employment over the same 23-year period is projected to increase by 168.64 percent, or a 3.59 percent annual growth rate. (Urban Crossroads, 2018c, p. 86)

Based on a comparison of Existing traffic volumes to the EAPC forecasts, the average growth rate is estimated at approximately 7.78 percent compounded annually between Existing and EAPC traffic conditions. The annual growth rate at each individual intersection is not lower than 3.30 percent compounded annually to as high as 16.8 percent compounded annually over the same time period. Therefore, the annual growth rate utilized for the purposes of this analysis would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Lake Elsinore for EAPC traffic conditions, especially when considered along with the addition of Project-related traffic. As such, the growth in traffic volumes assumed in the



Project's TIA would tend to overstate as opposed to understate the potential LOS deficiencies to traffic and circulation. (Urban Crossroads, 2018c, p. 86)

Any other cumulative projects that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Any additional traffic generated by other projects not on the cumulative projects list is accounted for through background ambient growth factors that have been applied to the peak hour volumes at study area intersections. (Urban Crossroads, 2018c, p. 86)

7. *Near-Term Traffic Forecasts*

To provide a comprehensive assessment of potential transportation network deficiencies, a type of analysis, "buildup", was performed in support of this work effort. The "buildup" method was used to approximate the EAP traffic forecasts including background traffic, and is intended to identify the peak hour LOS deficiencies on both the existing and planned near-term circulation system. The "buildup" method was also utilized to approximate the EAPC traffic forecasts, and is intended to identify the LOS deficiencies on both the existing and planned near-term circulation system. The EAPC traffic forecasts include background traffic, traffic generated by other cumulative development projects within the study area, and the traffic generated by the proposed Project. (Urban Crossroads, 2018c, p. 86)

As noted previously, an analysis of the proposed Project at various development tiers has been assessed for the purposes of the Project's TIA. The near-term traffic analysis includes the following traffic conditions, with the various traffic components: (Urban Crossroads, 2018c, pp. 86-87)

- EAP (2020)
 - Existing 2018 counts
 - Ambient growth traffic (4.04%)
 - Project (Phase 1) traffic
- EAP (2021)
 - Existing 2018 counts
 - Ambient growth traffic (6.12%)
 - Project (Phase 2) traffic
- EAP (2024)
 - Existing 2018 counts
 - Ambient growth traffic (12.62%)
 - Project Buildout traffic
- EAPC (2020)
 - Existing 2018 counts
 - Ambient growth traffic (4.04%)
 - Cumulative Development Project traffic (10% absorption)
 - Project (Phase 1) traffic
- EAPC (2021)
 - Existing 2018 counts
 - Ambient growth traffic (6.12%)



- Cumulative Development Project traffic (15% absorption)
 - Project (Phase 2) traffic
- EAPC (2024)
 - Existing 2018 counts
 - Ambient growth traffic (12.62%)
 - Cumulative Development Project traffic (30% absorption)
 - Project Buildout traffic

C. Existing Plus Project (E+P) Traffic Conditions

In an effort to satisfy the CEQA Guideline § 15125(a), an analysis of existing traffic volumes plus traffic generated by the proposed Project (E+P) has been included herein. This analysis scenario has been provided for informational purposes only as Project impacts have been discerned from a comparison of Existing (2018) and EA conditions to EAP (2020), EAP (2021), and EAP (2024) (per the County's traffic study guidelines). This is because it is not reasonable to assume that Project traffic would impact study area facilities under 2018 conditions, as the Project is anticipated to be built-out and occupied in 2020 (Phase 1), 2021 (Phase 2), and 2024 (Phase 3/Project buildout). (Urban Crossroads, 2018c, p. 89)

1. Roadway Improvements – E+P Conditions

The lane configurations and traffic controls assumed to be in place for E+P conditions were previously shown on Figure 4.16-2, and consist of the following: (Urban Crossroads, 2018c, p. 89)

- 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). This includes B Street between El Toro Road and Nichols Road as part of Phase 1.

2. E+P Traffic Volume Forecasts

This scenario includes Existing traffic volumes plus Project traffic. Exhibit 5-1 of the Project's TIA (*Technical Appendix L*) shows the ADT and peak hour intersection turning movement volumes that can be expected for E+P (Phase 1) traffic conditions. Exhibit 5-2 of the TIA shows the ADT and peak hour intersection turning movement volumes that can be expected for E+P (Phase 2) traffic conditions. TIA Exhibit 5-3 shows the ADT and peak hour intersection turning movement volumes that can be expected for E+P (Project Buildout) traffic conditions. (Urban Crossroads, 2018c, p. 89)

Starting with Phase 1 (2020), the Project would provide a connection between Nichols Road and El Toro Road via B Street. As such, it is unlikely that existing through traffic would continue to utilize the existing El Toro Road segments to access Nichols Road once B Street provides access to Nichols Road. As such, the existing volumes at El Toro Road at Nichols Road and El Toro Road/Wood Mesa Court at El Toro Road have been reallocated to reflect the use of B Street starting in Phase 1. It is anticipated that 50% of the existing traffic would be reallocated to utilize B Street. (Urban Crossroads, 2018c, p. 89)

3. Intersection Operations Analysis – E+P Conditions

E+P peak hour traffic operations have been evaluated for each phase of development for the study area intersections based on the analysis methodologies presented in subsection 4.16.2. The intersection analysis results are summarized in Table 4.16-14, *Intersection Analysis for E+P Conditions*, which indicates that no additional intersection deficiencies are anticipated with the addition of Project (Phase 1) traffic and Project (Phase 2) traffic, in addition to those previously identified under Existing traffic conditions. (Urban Crossroads, 2018c, p. 89)

Table 4.16-14 Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control ²	Existing (2018)				E+P (Phase 1)				E+P (Phase 2)				E+P (Buildout)			
			Delay ¹ (secs.)		LOS ³		Delay ¹ (secs.)		LOS ³		Delay ¹ (secs.)		LOS ³		Delay ¹ (secs.)		LOS ³	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Lake St. & Nichols Rd.	TS	16.3	25.4	B	C	16.4	25.6	B	C	16.7	25.9	B	C	19.4	29.4	B	C
2	Lake St. & Alberhill Ranch Rd.	TS	12.4	7.4	B	A	12.4	7.4	B	A	12.4	7.4	B	A	13.6	8.2	B	A
3	Alberhill Ranch Rd. & Nichols Rd.	AWS	11.4	9.7	B	A	11.4	9.7	B	A	11.4	9.8	B	A	13.3	10.5	B	B
4	Lakeshore Dr. & Riverside Dr. (SR-74)	TS	44.9	42.5	D	D	45.0	42.5	D	D	45.5	42.7	D	D	46.4	43.8	D	D
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	CSS	81.0	>100.0	F	F	82.4	>100.0	F	F	84.0	>100.0	F	F	>100.0	>100.0	F	F
6	Collier Av. & Nichols Rd.	CSS	20.5	28.9	C	D	20.7	29.4	C	D	22.2	31.3	C	D	35.5	54.0	E	F
7	Collier Av. & Riverside Dr. (SR-74)	TS	14.9	24.7	B	C	15.0	24.8	B	C	15.4	25.5	B	C	18.2	29.5	B	C
8	Collier Av. & Central Av. (SR-74)	TS	34.2	33.0	C	D	34.2	33.0	C	D	34.1	33.1	C	D	34.1	33.1	C	D
9	I-15 Southbound Ramps & Nichols Rd.	AWS	15.4	13.4	C	B	15.6	13.7	C	B	16.9	14.9	C	B	48.5	25.0	E	C
10	I-15 Northbound Ramps & Nichols Rd.	CSS	>100.0	29.9	F	D	>100.0	32.3	F	D	>100.0	46.8	F	E	>100.0	>100.0	F	F
11	A St. & Nichols Rd.	CSS/TS	Future Intersection				Future Intersection				15.9	12.1	C	B	15.8	12.9	B	B
12	B St. & Nichols Rd.	CSS	Future Intersection				13.7	10.8	B	B	14.7	11.2	B	B	14.9	11.2	B	B
13	B St. & F St.	CSS	Future Intersection				Future Intersection				11.5	10.2	A	B	11.3	10.0	B	B
14	B St. & H St.	CSS	Future Intersection				Future Intersection				0.0	0.0	A	A	9.8	9.0	A	A
15	K St. & B St.	CSS	Future Intersection				9.2	8.9	A	A	9.9	9.3	A	A	10.5	9.7	B	A
16	El Toro Rd. & B St.	CSS	Future Intersection				11.3	9.3	B	A	11.5	9.4	B	A	12.1	9.6	B	A
17	El Toro Rd. & Tereticornis Av.	CSS	>100.0	10.2	F	B	>100.0	10.2	F	B	>100.0	10.4	F	B	>100.0	10.7	F	B
18	El Toro Rd. & Carmela Ct. <i>With Normalized PHF^{4,5}</i>	CSS	22.4	--	C	--	22.6	--	C	--	23.3	--	C	--	31.3	--	D	--
		CSS	>100.0	11.5	F	B	>100.0	11.5	F	B	>100.0	11.8	F	B	>100.0	12.6	F	B
		CSS	>100.0	--	F	--	>100.0	--	F	--	>100.0	--	F	--	>100.0	--	F	--
19	Dexter Av. & Central Av. (SR-74)	TS	39.6	46.5	D	D	39.7	46.5	D	D	39.8	46.7	D	D	41.6	48.3	D	D
20	Cambern Av. & Central Av. (SR-74)	TS	26.3	27.2	C	C	26.3	27.2	C	C	26.3	27.2	C	C	27.1	27.5	C	C
21	Driveway 1 & Nichols Rd.	CSS	Future Intersection				Future Intersection				Future Intersection				12.4	10.3	B	B

¹ BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

² Per the Highway Capacity Manual (6th Edition), 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 LOS = Level of Service

⁵ The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing peak hour factor from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much higher in comparison to the other 15-minute periods within the hour.

⁶ PHF = Peak Hour Factor

(Urban Crossroads, 2018c, Table 5-1)

As shown in Table 4.16-14, the following intersections are anticipated to operate at unacceptable LOS with the addition of Project (Project Buildout) traffic, in addition to those previously identified under Existing, E+P (Phase 1), and E+P (Phase 2) traffic conditions (Urban Crossroads, 2018c, p. 94):

- Collier Avenue & Nichols Road (#6) – LOS E AM peak hour; LOS F PM peak hour
- I-15 Southbound Ramps & Nichols Road (#9) – LOS E AM peak hour only
- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour (with normalized PHF)

A summary of the peak hour intersection LOS for E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) conditions are shown on Exhibits 5-4, 5-5, and 5-6, respectively, of the Project's TIA (*Technical Appendix L*). The intersection operations analysis worksheets for E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout)

traffic conditions are included in Appendices 5.1, 5.2, and 5.3 of the Project's TIA, respectively. (Urban Crossroads, 2018c, p. 94)

4. Traffic Signal Warrants Analysis – E+P Conditions

There are no additional intersections anticipated to meet traffic signal warrants for E+P (Phase 1 and Phase 2) traffic conditions (see Appendices 5.4 and 5.5, respectively, of the Project's TIA [*Technical Appendix L*]). The intersection of A Street and Nichols Road is anticipated to meet the traffic signal warrant under E+P (Project Buildout) traffic conditions (see Appendix 5.6 of the Project's TIA). (Urban Crossroads, 2018c, p. 94)

5. Off-Ramp Queuing Analysis – E+P Conditions

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Nichols 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-15 Freeway mainline. Queuing analysis findings are presented in Table 4.16-15, *Peak Hour Freeway Off-Ramp Queuing Summary for E+P Conditions*, for E+P traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.16-15, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for E+P traffic conditions. (Urban Crossroads, 2018c, p. 94)

Table 4.16-15 Peak Hour Freeway Off-Ramp Queuing Summary for E+P Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2018)				E+P (Phase 1)				E+P (Phase 2)				E+P (Project Buildout)			
			95th Percentile Queue (Feet)		Acceptable?		95th Percentile Queue (Feet)		Acceptable?		95th Percentile Queue (Feet)		Acceptable?		95th Percentile Queue (Feet)		Acceptable?	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Off-Ramp & Nichols Rd.	SBL/T/R	1,600	80	43	Yes	Yes	83	45	Yes	Yes	93	55	Yes	Yes	185	83	Yes	Yes
I-15 NB Off-Ramp & Nichols Rd.	NBL/T/R	1,530	495	128	Yes	Yes	520	138	Yes	Yes	640	195	Yes	Yes	1,328	465	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided

(Urban Crossroads, 2018c, Table 5-2)

Worksheets for E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) traffic conditions offramp queuing analysis are provided in TIA Appendices 5.7, 5.8, and 5.9 for E+P traffic conditions, respectively (refer to *Technical Appendix L*). (Urban Crossroads, 2018c, p. 94)

6. Basic Freeway Segment Analysis – E+P Conditions

E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibits 5-7, 5-8, and 5-9, respectively, of the Project's TIA (*Technical Appendix L*). As shown on Table 4.16-16, *Basic Freeway Segment Analysis for E+P Conditions*, the basic freeway segments analyzed for this study are anticipated to operate at an acceptable LOS during the peak hours, with the addition of Project traffic. E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) basic freeway segment analysis worksheets are provided in Appendices 5.10, 5.11, and 5.12, respectively, of the Project's TIA. (Urban Crossroads, 2018c, p. 94)



Table 4.16-16 Basic Freeway Segment Analysis for E+P Conditions

Freeway Direction	Mainline Segment	Lanes ¹	Existing (2018)				E+P (Phase 1)				E+P (Phase 2)				E+P (Project Buildout)			
			Density ²		LOS ³		Density ²		LOS ³		Density ²		LOS ³		Density ²		LOS ³	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway Southbound	North of Nichols Rd.	3	26.7	32.4	D	D	26.7	32.5	D	D	26.8	32.7	D	D	27.2	33.0	D	D
	South of Nichols Rd.	3	27.4	33.2	D	D	27.5	33.2	D	D	27.7	33.4	D	D	28.0	33.8	D	D
	North of Nichols Rd.	3	21.9	16.7	C	B	21.9	16.7	C	B	22.1	16.8	C	B	22.3	17.0	C	B
	South of Nichols Rd.	3	22.4	17.1	C	B	22.4	17.1	C	B	22.5	17.3	C	B	22.9	17.5	C	B

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

(Urban Crossroads, 2018c, Table 5-3)

7. Freeway Merge/Diverge Analysis – E+P Conditions

Ramp merge and diverge operations were also evaluated for E+P (Phase 1), E+P (Phase 2) and E+P (Project Buildout) traffic conditions and the results of this analysis are presented in Table 4.16-17, *Freeway Ramp Junction Merge/Diverge Analysis for E+P Conditions*. As shown in Table 4.16-17, the freeway ramp merge and diverge areas are anticipated to operate at LOS D or better. E+P (Phase 1), E+P (Phase 2), and E+P (Project Buildout) freeway ramp junction operations analysis worksheets are provided in Appendices 5.13, 5.14 and 5.15 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 103)

D. Existing plus Ambient (EA) and Existing Plus Ambient Plus Project (EAP) – 2020 Traffic Conditions

1. Roadway Improvements – EA and EAP (2020) Conditions

The lane configurations and traffic controls assumed to be in place for EAP (2020) conditions were previously shown on Figure 4.16-2, and consist of the following: (Urban Crossroads, 2018c, p. 89)

Table 4.16-17 Freeway Ramp Junction Merge/Diverge Analysis for E+P Conditions

Freeway Direction	Ramp or Segment	Lanes on Freeway ¹	Existing (2018)				E+P (Phase 1)				E+P (Phase 2)				E+P (Project Buildout)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³
I-15 Freeway Southbound	Off-Ramp at Nichols Rd.	3	27.2	D	31.2	D	27.2	D	31.2	D	27.3	D	31.4	D	27.7	D	31.6	D
	On-Ramp at Nichols Rd.	3	29.5	C	34.3	D	29.5	C	34.3	D	29.7	C	34.4	D	30.0	D	34.8	D
	On-Ramp at Nichols Rd.	3	24.1	C	18.5	B	24.1	C	18.5	B	24.3	C	18.6	B	24.5	C	18.8	B
	Off-Ramp at Nichols Rd.	3	23.7	C	18.4	C	23.7	C	18.5	C	23.8	C	18.6	C	24.2	D	18.9	B

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

(Urban Crossroads, 2018c, Table 5-4)



- 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 (2020) conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). This includes B Street between El Toro Road and Nichols Road as part of Phase 1.

2. EA (2020) Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 4.04% (2 percent per year compounded over 2 years) is included for EA (2020) traffic conditions. Cumulative development projects are not included as part of the EA analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EA (2020) traffic conditions are shown on Exhibit 6-1 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 109)

3. EAP (2020) Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 4.04% (2 percent per year compounded over 2 years) is included for EAP (2020) traffic conditions, plus Phase 1 Project traffic. Cumulative development projects are not included as part of the EAP analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAP (2020) traffic conditions are shown on Exhibit 6-2 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 109)

Starting with Phase 1 (2020), the Project would provide a connection between Nichols Road and El Toro Road via B Street. As such, it is unlikely that existing through traffic would continue to utilize the existing El Toro Road to access Nichols Road once B Street provides access to Nichols Road. As such, the existing volumes at El Toro Road at Nichols Road and El Toro Road/Wood Mesa Court at El Toro Road would be reallocated to reflect the use of B Street starting in Phase 1 (2020). It is anticipated that 50% of the existing traffic would be reallocated to utilize B Street. (Urban Crossroads, 2018c, p. 109)

4. Intersection Operations Analysis – EA and EAP (2020) Conditions

LOS calculations were conducted for the study intersections to evaluate their operations under EA and EAP (2020) traffic conditions with roadway and intersection geometrics consistent with those described above for EA and EAP (2020) conditions. The intersection analysis results are summarized in Table 4.16-18, *Intersection Analysis for EA and EAP (2020) Conditions*, which indicates there are no additional intersections anticipated to operate at unacceptable LOS for EA and EAP (2020) traffic conditions beyond those previously identified under Existing (2018) traffic conditions. (Urban Crossroads, 2018c, p. 112)

As previously indicated, the following intersections were shown to operate at a deficient LOS for Existing (2018) conditions. Therefore, the addition of Project traffic to the following intersections would represent cumulatively-considerable impacts of the proposed Project under EAP 2020 conditions:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM peak hour only
- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only



Table 4.16-18 Intersection Analysis for EA and EAP (2020) Conditions

#	Intersection	Traffic Control ²	EA (2020)				EAP (2020)				
			Delay ¹ (secs.)		LOS ³		Delay ¹ (secs.)		LOS ³		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Lake St. & Nichols Rd.	TS	17.3	30.2	B	C	17.4	30.3	B	C	
2	Lake St. & Alberhill Ranch Rd.	TS	13.3	7.8	B	A	13.2	7.8	B	A	
3	Alberhill Ranch Rd. & Nichols Rd.	AWS	11.8	9.9	B	A	11.8	9.9	B	A	
4	Lakeshore Dr. & Riverside Dr. (SR-74)	TS	47.8	45.1	D	D	47.8	45.2	D	D	
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	CSS	97.8	>100.0	F	F	99.9	>100.0	F	F	
6	Collier Av. & Nichols Rd.	CSS	21.6	32.1	C	D	21.9	32.7	C	D	
7	Collier Av. & Riverside Dr. (SR-74)	TS	15.2	26.3	B	C	15.4	26.4	B	C	
8	Collier Av. & Central Av. (SR-74)	TS	34.5	33.4	C	C	34.5	33.4	C	C	
9	I-15 Southbound Ramps & Nichols Rd.	AWS	16.4	14.1	C	B	16.8	14.4	C	B	
10	I-15 Northbound Ramps & Nichols Rd.	CSS	>100.0	35.3	F	E	>100.0	38.4	F	E	
11	A St. & Nichols Rd.	CSS	Future Intersection				Future Intersection				
12	B St. & Nichols Rd.		Future Intersection				14.1	10.9	B	B	
13	B St. & F St.		Future Intersection				Future Intersection				
14	B St. & H St.		Future Intersection				Future Intersection				
15	K St. & B St.	CSS	Future Intersection				9.2	8.9	A	A	
16	El Toro Rd. & B St.	CSS	Future Intersection				11.5	9.4	B	A	
17	El Toro Rd. & Tereticornis Av.	CSS	>100.0	10.3	F	B	>100.0	10.3	F	B	
18	El Toro Rd. & Carmela Ct.	With Normalized PHF ^{4,5}	CSS	24.6	--	C	--	24.9	--	C	--
			CSS	>100.0	11.7	F	B	>100.0	11.7	F	B
		With Normalized PHF ^{4,5}	CSS	>100.0	--	F	--	>100.0	--	F	--
19	Dexter Av. & Central Av. (SR-74)	TS	41.4	45.7	D	D	41.5	50.3	D	D	
20	Cambern Av. & Central Av. (SR-74)	TS	28.4	28.4	C	C	28.4	28.4	C	C	
21	Driveway 1 & Nichols Rd.	CSS	Future Intersection				Future Intersection				

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ 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 LOS = Level of Service

⁴ The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing peak hour factor from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much

⁵ PHF = Peak Hour Factor

(Urban Crossroads, 2018c, Table 6-1)

Although the intersection of El Toro Road and Tereticornis Avenue (#17) is anticipated to operate at an unacceptable LOS during the AM peak hour, it is anticipated to operate at an acceptable LOS with a normalized PHF (Urban Crossroads, 2018c, p. 60). As such, Project impacts to the intersection of El Toro Road and Tereticornis Avenue would be less than significant under EAP (2020) conditions.

A summary of the peak hour intersection LOS for EA and EAP (2020) traffic conditions are shown on Exhibits 6-3 and 6-4, respectively, of the Project's TIA (*Technical Appendix L*). The intersection operations analysis worksheets for EA and EAP (2020) traffic conditions are included in Appendices 6.1 and 6.2 of the Project's TIA, respectively. (Urban Crossroads, 2018c, p. 112)



5. Traffic Signal Warrants Analysis – EA and EAP (2020) Conditions

No additional study area intersections are anticipated to meet traffic signal warrants for EA and EAP (2020) traffic conditions beyond those previously warranted under Existing traffic conditions (see Appendices 6.3 and 6.4, respectively, of the Project's TIA [*Technical Appendix L*] (Urban Crossroads, 2018c, p. 112). As previously indicated, the following intersections meet traffic signal warrants for Existing (2018) traffic conditions (Urban Crossroads, 2018c, p. 60):

- Collier Avenue & Nichols Road (#6)
- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

Although the signal warrant was met at the intersection of Collier Av. at Nichols Rd. (#6), Table 4.16-18 shows that this intersection would operate at an acceptable LOS B in the AM peak hour and LOS C in the PM peak hour. Accordingly, Project impacts due to signal warrants at the intersection of Collier Av. at Nichols Rd. (#6) would be less than significant under EAP (2020) conditions.

Although the signal warrant was met at the intersection of I-15 Southbound Ramps at Nichols Rd. (#9), Table 4.16-18 shows that this intersection would operate at an acceptable LOS C in the AM peak hour and LOS B in the PM peak hour. Accordingly, Project impacts due to signal warrants at the intersection of I-15 Southbound Ramps at Nichols Rd. (#9) would be less than significant under EAP (2020) conditions.

Impacts due to the need to signalize the intersections of I-15 Northbound Ramps & Nichols Road (#10) and El Toro Road & Carmela Court (#18) represent cumulatively-considerable impacts of the proposed Project under EAP (2020) conditions

6. Off-Ramp Queuing Analysis – EA and EAP (2020) Conditions

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Nichols 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-15 Freeway mainline. Queuing analysis findings are presented in Table 4.16-19, *Peak Hour Freeway Off-Ramp Queuing Summary for EA and EAP (2020) Conditions*, for EA and EAP (2020) traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.16-19, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EA and EAP (2020) traffic conditions; therefore, no impacts would occur. Worksheets for EA and EAP (2020) conditions off-ramp queuing analysis are provided in Appendices 6.5 and 6.6, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 112)

Table 4.16-19 Peak Hour Freeway Off-Ramp Queuing Summary for EA and EAP (2020) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	EA (2020)				EAP (2020)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Off-Ramp & Nichols Rd.	SBL/T/R	1,600	90	45	Yes	Yes	93	48	Yes	Yes
I-15 NB Off-Ramp & Nichols Rd.	NBL/T/R	1,530	578	150	Yes	Yes	605	163	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided (Urban Crossroads, 2018c, Table 6-2)

7. Basic Freeway Segment Analysis – EA and EAP (2020) Conditions

EA and EAP (2020) mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibits 6-5 and 6-6, respectively, of the Project's TIA (*Technical Appendix L*). As shown on Table 4.16-20, *Basic Freeway Segment Analysis for EA and EAP (2020) Conditions*, the freeway segments analyzed in the Project's TIA are anticipated to operate at an acceptable LOS during the peak hours under EA and EAP (2020) traffic conditions, with the exception of the following segment: (Urban Crossroads, 2018c, p. 112)

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

As shown in Table 4.16-20, the above-listed segment would operate at a deficient LOS E without the addition of Project traffic under EA (2020) conditions. Therefore, Project impacts to the above-listed segment would be cumulatively considerable.

EA and EAP (2020) basic freeway segment analysis worksheets are provided in Appendices 6.7 and 6.8, respectively, of the Project's TIA. (Urban Crossroads, 2018c, p. 112)

8. Freeway Merge/Diverge Analysis – EA and EAP (2020) Conditions

Ramp merge and diverge operations were also evaluated for EAP conditions and the results of this analysis are presented in Table 4.16-21, *Freeway Ramp Junction Merge/Diverge Analysis for EA and EAP (2020) Conditions*. As shown on Table 4.16-21, the ramp merge/diverge segments analyzed in the Project's TIA are anticipated to operate at an acceptable LOS during the peak hours under EA and EAP (2020) traffic conditions, with the exception of the following ramp junction: (Urban Crossroads, 2018c, p. 120)

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

As shown in Table 4.16-21, the above-listed freeway merge/diverge location would operate at a deficient LOS without the addition of Project traffic. Thus, Project impacts to the above-listed freeway merge/diverge location would be cumulatively considerable.



Table 4.16-20 Basic Freeway Segment Analysis for EA and EAP (2020) Conditions

Freeway	Direction	Mainline Segment	Lanes ¹	EA (2020)				EAP (2020)			
				Density ²		LOS ³		Density ²		LOS ³	
				AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway	Southbound	North of Nichols Rd.	3	28.2	34.6	D	D	28.2	34.7	D	D
		South of Nichols Rd.	3	29.0	35.5	D	E	29.0	35.6	D	E
	Northbound	North of Nichols Rd.	3	23.0	17.4	C	B	23.0	17.4	C	B
		South of Nichols Rd.	3	23.5	17.8	C	B	23.5	17.8	C	B

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

(Urban Crossroads, 2018c, Table 6-3)

Table 4.16-21 Freeway Ramp Junction Merge/Diverge Analysis for EA and EAP (2020) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway ¹	EA (2020)				EAP (2020)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³
I-15 Freeway	Southbound	Off-Ramp at Nichols Rd.	3	28.4	D	32.5	E	28.4	D	32.5	E
		On-Ramp at Nichols Rd.	3	30.9	D	36.1	D	31.0	D	36.2	D
	Northbound	On-Ramp at Nichols Rd.	3	25.2	C	19.3	B	25.2	C	19.3	B
		Off-Ramp at Nichols Rd.	3	24.7	C	19.1	C	24.7	C	19.2	C

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

(Urban Crossroads, 2018c, p. 120)

EA and EAP (2020) freeway ramp junction operations analysis worksheets are provided in Appendices 6.9 and 6.10, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 120)



E. Existing plus Ambient (EA) and Existing plus Ambient plus Project (EAP) – 2021 Traffic Conditions

1. Roadway Improvements – EA and EAP (2021) Conditions

The lane configurations and traffic controls assumed to be in place for EAP (2021) conditions were previously shown on Figure 4.16-2, and consist of the following: (Urban Crossroads, 2018c, p. 123)

- 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 (2021) conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). This includes B Street between El Toro Road and Nichols Road as part of Phase 1.

2. EA (2021) Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 6.12% (2 percent per year compounded over 3 years) is included for EA (2021) traffic conditions. Cumulative development projects are not included as part of the EA analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EA (2021) traffic conditions are shown on Exhibit 7-1 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 123)

3. EAP (2021) Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 6.12% (2 percent per year compounded over 3 years) is included for EAP (2021) traffic conditions, plus Phase 1 and Phase 2 Project traffic. Cumulative development projects are not included as part of the EAP analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAP (2021) traffic conditions are shown on Exhibit 7-2 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 123)

4. Intersection Operations Analysis – EA and EAP (2021) Conditions

LOS calculations were conducted for the study intersections to evaluate their operations under EAP conditions with roadway and intersection geometrics consistent with those described above for EA and EAP (2021) conditions. The intersection analysis results are summarized in Table 4.16-22, *Intersection Analysis for EA and EAP (2021) Conditions*, which indicates that the following additional intersection is anticipated to operate at unacceptable LOS for EA (2021) traffic conditions, in addition to those previously identified under EA (2020) traffic conditions: (Urban Crossroads, 2018c, p. 123)

- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)

Because the Project would contribute to, but would not directly cause, the impact at the above-listed intersection, Project impacts to the intersection of El Toro Road at Tereticornis Avenue (#17) would be cumulatively considerable under EAP (2021) conditions.

Table 4.16-22 Intersection Analysis for EA and EAP (2021) Conditions

#	Intersection	Traffic Control ²	EA (2021)				EAP (2021)			
			Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		LOS ³	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Lake St. & Nichols Rd.	TS	17.9	33.6	B	C	18.3	34.1	B	C
2	Lake St. & Alberhill Ranch Rd.	TS	13.8	8.0	B	A	13.8	8.0	B	A
3	Alberhill Ranch Rd. & Nichols Rd.	AWS	12.0	10.0	B	A	12.1	10.1	B	B
4	Lakeshore Dr. & Riverside Dr. (SR-74)	TS	49.2	46.5	D	D	49.8	46.8	D	D
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	CSS	>100.0	>100.0	F	F	>100.0	>100.0	F	F
6	Collier Av. & Nichols Rd.	CSS	22.4	34.0	C	D	24.3	37.3	C	E
7	Collier Av. & Riverside Dr. (SR-74)	TS	15.5	27.2	B	C	16.0	28.1	B	C
8	Collier Av. & Central Av. (SR-74)	TS	34.7	33.6	C	C	34.7	33.6	C	C
9	I-15 Southbound Ramps & Nichols Rd.	AWS	16.9	14.5	C	B	18.7	16.4	C	C
10	I-15 Northbound Ramps & Nichols Rd.	CSS	>100.0	38.2	F	E	>100.0	66.3	F	F
11	A St. & Nichols Rd.	CSS	Future Intersection				16.6	12.4	C	B
12	B St. & Nichols Rd.	CSS	Future Intersection				15.4	11.4	C	B
13	B St. & F St.	CSS	Future Intersection				11.7	10.3	B	B
14	B St. & H St.	CSS	Future Intersection				0.0	0.0	A	A
15	K St. & B St.	CSS	Future Intersection				10.0	9.3	B	A
16	El Toro Rd. & B St.	CSS	Future Intersection				11.8	9.4	B	A
17	El Toro Rd. & Tereticornis Av.	CSS	>100.0	10.4	F	B	>100.0	10.5	F	B
18	El Toro Rd. & Carmela Ct.		With Normalized PHF ^{5,6}							
		CSS	25.8	--	D	--	27.0	--	D	--
		CSS	>100.0	11.7	F	B	>100.0	12.0	F	B
19	Dexter Av. & Central Av. (SR-74)		With Normalized PHF ^{5,6}							
		CSS	>100.0	--	F	--	>100.0	--	F	--
20	Cambern Av. & Central Av. (SR-74)	TS	42.5	46.9	D	D	42.8	53.4	D	D
21	Driveway 1 & Nichols Rd.	TS	29.8	29.2	C	C	29.9	29.2	C	C
		CSS	Future Intersection				Future Intersection			

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ Per the Highway Capacity Manual (6th Edition), 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 LOS = Level of Service

⁴ For buildout conditions, the intersection is evaluated with a traffic signal, an eastbound right-turn pocket and striping the northbound approach to a left turn and right turn lane.

⁵ The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing peak hour factor from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much

⁶ PHF = Peak Hour Factor

(Urban Crossroads, 2018c, Table 7-1)

With the addition of Phase 2 Project traffic, the following additional intersection is anticipated to operate at an unacceptable LOS during one or more peak hours under EAP (2021) traffic conditions: (Urban Crossroads, 2018c, p. 123)

- Collier Avenue & Nichols Road (#6) – LOS E PM peak hour only

Because Project traffic would directly cause the LOS deficiency at the above-listed intersection, Project impacts to the intersection of Collier Avenue at Nichols Road (#6) represent a direct impact of the proposed Project under Phase 2 (EAP 2021) conditions.



As previously indicated, the following intersections were shown to operate at a deficient LOS for Existing (2018) conditions. Therefore, the addition of Project traffic to the following facilities would represent cumulatively-considerable impacts of Phase 2 (EAP 2021 conditions) of the proposed Project:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only

A summary of the peak hour intersection LOS for EA and EAP (2021) traffic conditions are shown on Exhibits 7-3 and 7-4, respectively. The intersection operations analysis worksheets for EA and EAP (2021) traffic conditions are included in Appendices 7.1 and 7.2 of the Project's TIA, respectively (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 127)

5. Traffic Signal Warrant Analysis – EA and EAP (2021) Conditions

No additional study area intersections are anticipated to meet traffic signal warrants for EA and EAP (2021) traffic conditions in addition to those previously warranted under Existing traffic conditions (see Appendices 7.3 and 7.4, respectively, of the Project's TIA [*Technical Appendix L*]) (Urban Crossroads, 2018c, p. 127). As previously indicated, the following intersections meet traffic signal warrants for Existing (2018) traffic conditions (Urban Crossroads, 2018c, p. 60):

- Collier Avenue & Nichols Road (#6)
- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

However, as shown in Table 4.16-22 the intersection of I-15 Southbound Ramps & Nichols Road (#9) would operate at an acceptable LOS C during both peak hours under EAP (2021) conditions; therefore, impacts due to the need for signalization would be less than significant.

The addition of Project traffic to the remaining three intersections listed above represent cumulatively-considerable impacts of the proposed Project under EAP (2021) conditions due to traffic signal warrants.

6. Off-Ramp Queuing Analysis – EA and EAP (2021) Conditions

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Nichols 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-15 Freeway mainline. Queuing analysis findings are presented in Table 4.16-23, *Peak Hour Freeway Off-Ramp Queuing Summary for EA and EAP (2021) Conditions*, for EA and EAP (2021) traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.16-23, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EA and EAP (2021) traffic conditions; therefore, no



impacts would occur. Worksheets for EA and EAP (2021) conditions off-ramp queuing analysis are provided in Appendices 7.5 and 7.6, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 127)

Table 4.16-23 Peak Hour Freeway Off-Ramp Queuing Summary for EA and EAP (2021) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	EA (2021)				EAP (2021)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Off-Ramp & Nichols Rd.	SBL/T/R	1,600	93	48	Yes	Yes	108	63	Yes	Yes
I-15 NB Off-Ramp & Nichols Rd.	NBL/T/R	1,530	623	163	Yes	Yes	773	250	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided (Urban Crossroads, 2018c, Table 7-2)

7. Basic Freeway Segment Analysis – EA and EAP (2021) Conditions

EA and EAP (2021) mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibits 7-5 and 7-6, respectively, of the Project's TIA (*Technical Appendix L*). As shown on Table 4.16-24, *Basic Freeway Segment Analysis for EA and EAP (2021) Conditions*, the freeway segments analyzed in the Project's TIA are anticipated to operate at an acceptable LOS during the peak hours under EA and EAP (2021) traffic conditions, with the exception of the following segment and the segment previously identified under EA and EAP (2020) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only

As shown in Table 4.16-24, the above-listed freeway segment would operate at a deficient LOS under EA (2021) conditions. Thus, the addition of Project traffic to this freeway segment represents a cumulatively-considerable impact of the proposed Project.

Additionally, and as previously noted, the following freeway segment was shown to operate at a deficient LOS under EA (2020) conditions; thus, the addition of Project traffic to the following freeway segment also represents a cumulatively-considerable impact of the proposed Project under EAP (2021) conditions:

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

EA and EAP (2021) basic freeway segment analysis worksheets are provided in Appendices 7.7 and 7.8, respectively, of the Project's TIA.



Table 4.16-24 Basic Freeway Segment Analysis for EA and EAP (2021) Conditions

Freeway	Direction	Mainline Segment	Lanes ¹	EA (2021)				EAP (2021)			
				Density ²		LOS ³		Density ²		LOS ³	
				AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway	Southbound	North of Nichols Rd.	3	29.0	35.8	D	E	29.0	36.2	D	E
		South of Nichols Rd.	3	29.9	36.8	D	E	30.1	37.0	D	E
	Northbound	North of Nichols Rd.	3	23.5	17.7	C	B	23.7	17.8	C	B
		South of Nichols Rd.	3	24.1	18.2	C	C	24.2	18.3	C	C

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

(Urban Crossroads, 2018c, Table 7-3)

8. Freeway Merge/Diverge Analysis – EA and EAP (2021) Conditions

Ramp merge and diverge operations were also evaluated for EA and EAP (2021) traffic conditions and the results of this analysis are presented in Table 4.16-25, *Freeway Ramp Junction Merge/Diverge Analysis for EA and EAP (2021) Conditions*. As shown on Table 4.16-25, there are no additional ramp merge/diverge junction areas anticipated to operate at an unacceptable LOS during the peak hours for EA and EAP (2021) traffic conditions, in addition to the location previously identified under EA (2020) traffic conditions. (Urban Crossroads, 2018c, p. 134) As previously indicated, the following freeway merge/diverge analysis location would operate at a deficient LOS under EA (2020) conditions; thus, the addition of Project traffic to the following merge/diverge location represents a cumulatively-considerable impact under EAP (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

EA and EAP (2021) freeway ramp junction operations analysis worksheets are provided in Appendices 7.9 and 7.10, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 134)

F. Existing plus Ambient (EA) and Existing plus Ambient plus Project (EAP) – 2024 Conditions

1. Roadway Improvements – EA and EAP (2024) Conditions

The lane configurations and traffic controls assumed to be in place for EAP (2021) conditions were previously shown on Figure 4.16-2, and consist of the following: (Urban Crossroads, 2018c, p. 139)

- 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). This includes B Street between El Toro Road and Nichols Road as part of Phase 1.

**Table 4.16-25 Freeway Ramp Junction Merge/Diverge Analysis for EA and EAP (2021)
Conditions**

Freeway	Direction	Ramp or Segment	Lanes on Freeway ¹	EA (2021)				EAP (2021)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³
I-15 Freeway	Southbound	Off-Ramp at Nichols Rd.	3	28.9	D	33.2	E	29.0	D	33.4	E
		On-Ramp at Nichols Rd.	3	31.7	D	36.1	D	31.9	D	37.3	D
	Northbound	On-Ramp at Nichols Rd.	3	25.7	C	19.7	B	25.9	C	19.8	B
		Off-Ramp at Nichols Rd.	3	25.2	D	19.6	C	25.2	D	19.8	C

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

(Urban Crossroads, 2018c, Table 7-4)

2. EA (2024) Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 12.62% (2 percent per year compounded over 6 years) is included for EA (2024) traffic conditions. Cumulative development projects are not included as part of the EA analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EA (2024) traffic conditions are shown on Exhibit 8-1 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 139)

3. EAP (2024) Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 12.62% (2 percent per year compounded over 6 years) is included for EAP (2024) traffic conditions, plus Project Buildout traffic. Cumulative development projects are not included as part of the EAP analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAP (2024) traffic conditions are shown on Exhibit 8-2 of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 139)

4. Intersection Operations Analysis – EA and EAP (2024) Conditions

LOS calculations were conducted for the study intersections to evaluate their operations under EAP conditions with roadway and intersection geometrics consistent with those described above for EA and EAP (2024) conditions. The intersection analysis results are summarized in Table 4.16-26, *Intersection Analysis for EA and EAP (2024) Conditions*, which indicates that the following additional intersection is anticipated to operate

at unacceptable LOS for EA (2024) traffic conditions, in addition to those previously identified under EA and EAP (2021) traffic conditions: (Urban Crossroads, 2018c, p. 139)

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM peak hour only

Table 4.16-26 Intersection Analysis for EA and EAP (2024) Conditions

#	Intersection	Traffic Control ²	EA (2024)				EAP (2024)				
			Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		LOS ³		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Lake St. & Nichols Rd.	TS	20.2	46.9	C	D	24.7	54.5	C	D	
2	Lake St. & Alberhill Ranch Rd.	TS	15.9	8.8	B	A	17.7	9.7	B	A	
3	Alberhill Ranch Rd. & Nichols Rd.	AWS	12.8	10.4	B	B	15.7	11.4	C	B	
4	Lakeshore Dr. & Riverside Dr. (SR-74)	TS	55.2	51.6	E	D	56.4	53.3	E	D	
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	CSS	>100.0	>100.0	F	F	>100.0	>100.0	F	F	
6	Collier Av. & Nichols Rd.	CSS	24.8	41.4	C	E	47.2	94.2	E	F	
7	Collier Av. & Riverside Dr. (SR-74)	TS	16.3	31.2	B	C	19.3	37.1	B	D	
8	Collier Av. & Central Av. (SR-74)	TS	35.3	34.3	D	C	35.3	34.6	D	D	
9	I-15 Southbound Ramps & Nichols Rd.	AWS	19.1	16.0	C	C	68.4	37.2	F	E	
10	I-15 Northbound Ramps & Nichols Rd.	CSS	>100.0	52.6	F	F	>100.0	>100.0	F	F	
11	A St. & Nichols Rd.	CSS/TS ⁴	Future Intersection				16.6	13.1	B	B	
12	B St. & Nichols Rd.	CSS	Future Intersection				16.7	11.7	C	B	
13	B St. & F St.	CSS	Future Intersection				11.8	10.2	B	B	
14	B St. & H St.	CSS	Future Intersection				10.0	9.1	B	A	
15	K St. & B St.	CSS	Future Intersection				10.8	9.8	B	A	
16	El Toro Rd. & B St.	CSS	Future Intersection				13.0	9.8	B	A	
17	El Toro Rd. & Tereticornis Av.	CSS	>100.0	10.6	F	B	>100.0	11.1	F	B	
18	El Toro Rd. & Carmela Ct.	With Normalized PHF ^{5,6}	CSS	29.5	--	D	--	51.2	--	F	--
			CSS	>100.0	12.1	F	B	>100.0	13.4	F	B
		With Normalized PHF ^{5,6}	CSS	>100.0	--	F	--	>100.0	--	F	--
19	Dexter Av. & Central Av. (SR-74)	TS	48.0	52.8	D	D	50.7	54.8	D	D	
20	Cambern Av. & Central Av. (SR-74)	TS	36.9	31.8	D	C	39.2	32.3	D	C	
21	Driveway 1 & Nichols Rd.	CSS	Future Intersection				13.1	10.5	B	B	

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ Per the Highway Capacity Manual (6th Edition), 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 LOS = Level of Service

⁴ For buildout conditions, the intersection is evaluated with a traffic signal, an eastbound right-turn pocket and striping the northbound approach to a left turn and right turn lane.

⁵ The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing peak hour factor from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much

⁶ PHF = Peak Hour Factor

(Urban Crossroads, 2018c, Table 8-1)

Because the Project would contribute to but would not directly cause the above-listed deficiency, the Project's impacts to the intersection of Lakeshore Drive and Riverside Drive (SR-74) (#4) would be cumulatively considerable under EAP (2024) conditions.



Table 4.16-26 shows that with the addition of Project Buildout traffic, the following additional intersection is anticipated to operate at an unacceptable LOS during one or more peak hours under EAP (2024) traffic conditions, in addition to the locations previously identified under EA (2024) traffic conditions: (Urban Crossroads, 2018c, p. 139)

- I-15 Southbound Ramps & Nichols Road (#9) – LOS F AM peak hour, LOS E PM peak hour

The above-listed deficiency would be directly caused by Project-related traffic; therefore, Project impacts to the intersection of I-15 Southbound Ramps at Nichols Road (#9) represent a direct impact of the proposed Project.

Additionally, the addition of Project traffic to the following intersections that were shown to be impacted under EA and/or EAP (2021) conditions also would represent cumulatively-considerable impacts of the proposed Project under EAP (2024) conditions:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- Collier Avenue & Nichols Road (#6) – LOS E AM peak hour and LOS F PM peak hour
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Tereticornis Avenue (#17) – LOS F AM peak hour only (with normalized PHF)
- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only (with normalized PHF)

A summary of the peak hour intersection LOS for EA and EAP (2024) traffic conditions are shown on Exhibits 8-3 and 8-4, respectively, of the Project's TIA (*Technical Appendix L*). The intersection operations analysis worksheets for EA and EAP (2024) traffic conditions are included in Appendices 8.1 and 8.2 of the Project's TIA, respectively. (Urban Crossroads, 2018c, p. 143)

5. Traffic Signal Warrant Analysis – EA and EAP (2024) Conditions

No additional study area intersections are anticipated to meet traffic signal warrants for EA and EAP (2024) traffic conditions in addition to those previously warranted under Existing traffic conditions (see Appendix 8.3 of the Project's TIA, *Technical Appendix L*). (Urban Crossroads, 2018c, p. 143)

The intersection of Alberhill Ranch Road & Nichols Road (#3) is anticipated to meet the traffic signal warrant under EAP (2024) traffic conditions (see Appendix 8.4 of the Project's TIA). However, this intersection operates at an acceptable LOS for EAP (2024) traffic conditions. As such, the intersection should be monitored, and a traffic signal should be installed at the discretion of the City of Lake Elsinore Traffic Engineer. Project impacts to the intersection of Alberhill Ranch Road & Nichols Road due to signal warrants would be less than significant. (Urban Crossroads, 2018c, p. 143)

As previously indicated, the following intersections meet traffic signal warrants for Existing (2018) traffic conditions; therefore, the addition of Project traffic to the following intersections represent cumulatively-considerable impacts of the proposed Project under EAP (2024) conditions (Urban Crossroads, 2018c, p. 60):



- Collier Avenue & Nichols Road (#6)
- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

6. Off-Ramp Queuing Analysis – EA and EAP (2024) Conditions

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Nichols 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-15 Freeway mainline. Queuing analysis findings are presented in Table 4.16-27, *Peak Hour Freeway Off-Ramp Queuing Summary for EA and EAP (2024) Conditions*, for EA and EAP (2024) traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.16-27, the I-15 Northbound off-ramp at Nichols Road is anticipated to experience queuing issues under EAP (2024) traffic conditions for the northbound shared left-through-right turn lane during the AM peak hour only. This represents a direct impact of the proposed Project under EAP (2024) conditions. Worksheets for EA and EAP (2024) conditions off-ramp queuing analysis are provided in Appendices 8.5 and 8.6, respectively, of the Project’s TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 143)

Table 4.16-27 Peak Hour Freeway Off-Ramp Queuing Summary for EA and EAP (2024) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	EA (2024)				EAP (2024)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Off-Ramp & Nichols Rd.	SBL/T/R	1,600	110	55	Yes	Yes	235	105	Yes	Yes
I-15 NB Off-Ramp & Nichols Rd.	NBL/T/R	1,530	758	213	Yes	Yes	1,563	653	No	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided

(Urban Crossroads, 2018c, Table 8-2)

7. Basic Freeway Segment Analysis – EA and EAP (2024) Conditions

EA and EAP (2024) mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibits 8-5 and 8-6, respectively of the Project’s TIA (*Technical Appendix L*). As shown on Table 4.16-28, *Basic Freeway Segment Analysis for EA and EAP (2024) Conditions*, there are no additional freeway segments anticipated to operate at an unacceptable LOS under EA and EAP (2024) traffic conditions, in addition to those previously identified under EA and EAP (2021) traffic conditions. (Urban Crossroads, 2018c, p. 143)

The Project would contribute traffic to the following freeway segments that were previously-identified as being cumulatively impacted by the Project; thus, Project impacts to the following freeway mainline segments would be cumulatively considerable under EAP (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

Table 4.16-28 Basic Freeway Segment Analysis for EA and EAP (2024) Conditions

Freeway	Direction	Mainline Segment	Lanes ¹	EA (2024)				EAP (2024)			
				Density ²		LOS ³		Density ²		LOS ³	
				AM	PM	AM	PM	AM	PM	AM	PM
I-15 Freeway	Southbound	North of Nichols Rd.	3	29.0	40.1	D	E	29.6	40.9	D	E
		South of Nichols Rd.	3	32.8	41.3	D	E	30.5	42.1	D	E
	Northbound	North of Nichols Rd.	3	25.3	18.9	C	C	23.9	19.2	C	C
		South of Nichols Rd.	3	26.0	19.3	C	C	24.6	19.7	C	C

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

(Urban Crossroads, 2018c, Table 8-3)

EA and EAP (2024) basic freeway segment analysis worksheets are provided in Appendices 8.7 and 8.8, respectively, of the Project's TIA. (Urban Crossroads, 2018c, p. 143)

8. Freeway Merge/Diverge Analysis – EA and EAP (2024) Conditions

Ramp merge and diverge operations were also evaluated for EA and EAP (2024) conditions and the results of this analysis are presented in Table 4.16-29, *Freeway Ramp Junction Merge/Diverge Analysis for EA and EAP (2024) Conditions*. As shown on Table 4.16-29, there are no additional ramp merge/diverge segments anticipated to operate at an unacceptable LOS under EA and EAP (2024) traffic conditions, in addition to those previously identified under EAP (2021) traffic conditions. (Urban Crossroads, 2018c, p. 143) The following freeway merge/diverge location was shown to operate at a deficient LOS under EA (2021) conditions; thus, Project impacts to the following freeway merge/diverge location would be cumulatively considerable under EAP (2024) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

EA and EAP (2024) freeway ramp junction operations analysis worksheets are provided in Appendices 8.9 and 8.10, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 143)



Table 4.16-29 Freeway Ramp Junction Merge/Diverge Analysis for EA and EAP (2024) Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway ¹	EA (2024)				EAP (2024)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³
I-15 Freeway	Southbound	Off-Ramp at Nichols Rd.	3	30.8	D	35.3	E	31.3	D	35.8	E
		On-Ramp at Nichols Rd.	3	34.0	D	40.3	D	34.6	D	41.0	D
	Northbound	On-Ramp at Nichols Rd.	3	27.5	C	21.0	C	27.9	C	21.1	C
		Off-Ramp at Nichols Rd.	3	26.8	D	20.8	C	27.3	D	21.2	C

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

(Urban Crossroads, 2018c, Table 8-4)

G. Existing plus Ambient plus Project plus Cumulative (EAPC) Conditions

1. Roadway Improvements – EAPC Conditions

The lane configurations and traffic controls assumed to be in place for EAPC conditions are consistent with the following improvements discussed below (Urban Crossroads, 2018c, p. 157):

- 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). This includes B Street between El Toro Road and Nichols Road as part of Phase 1.
- 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).

2. EAPC Traffic Volume Forecasts

To account for background traffic growth, an ambient growth from Existing conditions of 4.04% (2 percent per year compounded over 2 years) is included for EAPC (2020) traffic conditions, an ambient growth from Existing conditions of 6.12% (2 percent per year compounded over 3 years) is included for EAPC (2021) traffic conditions, and an ambient growth from Existing conditions of 12.62% (2 percent per year compounded over 6 years) is included for EAPC (2024) traffic conditions. Cumulative development projects are also included as part of the EAPC analysis. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAPC (2020), EAPC (2021), and EAPC (2024) traffic conditions are shown on



Exhibits 9-1, 9-2, and 9-3, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 157)

Starting with Phase 1 (2020), the Project would provide a connection between Nichols Road and El Toro Road via B Street. As such, it is unlikely that existing through traffic would continue to utilize El Toro Road to access Nichols Road once B Street provides access to Nichols Road. As such, the existing volumes at El Toro Road at Nichols Road and El Toro Road/Wood Mesa Court at El Toro Road would be reallocated to reflect the use of B Street starting in Phase 1 (2020). It is anticipated that 50% of the existing traffic would be reallocated to utilize B Street. (Urban Crossroads, 2018c, p. 157)

3. **Intersection Operations Analysis – EAPC Conditions**

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC conditions with roadway and intersection geometrics consistent with those described above. The intersection analysis results are summarized in Table 4.16-30, *Intersection Analysis for EAPC Conditions*.

□ EAPC (2020) Intersection Operations Analysis

As shown in Table 4.16-30, the following intersections were previously shown to operate at an acceptable LOS under both EA (2020) and EAP (2020) conditions (refer to Table 4.16-18); thus, impacts to the following intersections are the result of cumulative development traffic. Accordingly, Project impacts to the following intersections would be cumulatively considerable under EAPC (2020) conditions: (Urban Crossroads, 2018c, p. 161)

- Lake Street & Nichols Road (#1) – LOS F PM peak hour only
- Collier Avenue & Nichols Road (#6) – LOS F PM peak hour only
- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

As previously shown in Table 4.16-18, the following intersections were shown to operate at a deficient LOS under EA (2020) conditions; thus, because the Project would contribute to but would not directly cause the following LOS deficiencies, Project impacts at the following intersections would be cumulatively considerable under EAPC (2020) conditions: (Urban Crossroads, 2018c, p. 161)

- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Carmela Court (#18) – LOS E PM peak hour only (with normalized PHF)

A summary of the peak hour intersection LOS for EAPC (2020) traffic conditions are shown on Exhibit 9-4 of the Project's TIA (*Technical Appendix L*). The intersection operations analysis worksheets for EAPC (2020) traffic conditions are included in Appendix 9.1 of the TIA. (Urban Crossroads, 2018c, p. 161)



Table 4.16-30 Intersection Analysis for EAPC Conditions

#	Intersection	Traffic Control ²	EAPC (2020)				EAPC (2021)				EAPC (2024)			
			Delay ¹ (secs.)		LOS ³		Delay ¹ (secs.)		LOS ³		Delay ¹ (secs.)		LOS ³	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Lake St. & Nichols Rd.	TS	24.2	126.0	C	F	31.7	180.5	C	F	81.6	>200.0	F	F
2	Lake St. & Alberhill Ranch Rd.	TS	15.1	8.7	B	A	17.6	9.7	B	A	41.7	18.9	D	B
3	Alberhill Ranch Rd. & Nichols Rd.	AWS	16.0	13.0	C	B	21.2	16.7	C	C	>100.0	83.0	F	F
4	Lakeshore Dr. & Riverside Dr. (SR-74)	TS	49.7	47.9	D	D	53.1	51.8	D	D	67.0	66.9	E	E
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	CSS	>100.0	>100.0	F	F	>100.0	>100.0	F	F	>100.0	>100.0	F	F
	Current Intersection Lanes ⁴	CSS	>100.0	>100.0	F	F	>100.0	>100.0	F	F	>100.0	>100.0	F	F
6	Collier Av. & Nichols Rd.	CSS	29.7	74.7	D	F	41.1	>100.0	E	F	>100.0	>100.0	F	F
7	Collier Av. & Riverside Dr. (SR-74)	TS	16.2	29.6	B	C	17.4	34.1	B	C	23.4	59.9	C	E
8	Collier Av. & Central Av. (SR-74)	TS	34.6	33.5	C	C	34.7	33.9	C	C	35.7	37.6	D	D
9	I-15 Southbound Ramps & Nichols Rd.	AWS	21.4	20.4	C	C	30.6	34.7	D	D	>100.0	>100.0	F	F
10	I-15 Northbound Ramps & Nichols Rd.	CSS	>100.0	>100.0	F	F	>100.0	>100.0	F	F	>100.0	>100.0	F	F
	Current Intersection Control ⁵	AWS	51.1	13.9	F	B	85.4	18.3	F	C	>100.0	72.3	F	F
11	A St. & Nichols Rd.	CSS/TS ⁶	Future Intersection				16.7	12.4	C	B	16.6	13.1	B	B
12	B St. & Nichols Rd.	CSS	14.1	10.9	B	B	15.5	11.4	C	B	16.7	11.7	C	B
13	B St. & F St.	CSS	Future Intersection				11.7	10.3	B	B	11.8	10.2	B	B
14	B St. & H St.	CSS	Future Intersection				0.0	0.0	A	A	10.0	9.1	B	A
15	K St. & B St.	CSS	9.2	8.9	A	A	10.0	9.3	B	A	10.8	9.8	B	A
16	El Toro Rd. & B St.	CSS	11.5	9.4	B	A	11.8	9.4	B	A	13.0	9.8	B	A
17	El Toro Rd. & Tereticornis Av.	CSS	>100.0	10.4	F	B	>100.0	10.6	F	B	>100.0	11.2	F	B
	With Normalized PHF ^{7,8}	CSS	25.0	--	D	--	27.3	--	D	--	52.5	--	F	--
18	El Toro Rd. & Carmela Ct.	CSS	>100.0	11.7	F	B	>100.0	12.1	F	B	>100.0	13.5	F	B
	With Normalized PHF ^{7,8}	CSS	>100.0	--	F	--	>100.0	--	F	--	>100.0	--	F	--
19	Dexter Av. & Central Av. (SR-74)	TS	44.5	59.8	D	E	49.8	70.1	D	E	76.7	118.7	E	F
20	Cambern Av. & Central Av. (SR-74)	TS	32.8	37.2	C	D	38.8	44.5	D	D	68.1	77.4	E	E
21	Driveway 1 & Nichols Rd.	CSS	Future Intersection				Future Intersection				13.1	10.5	B	B

¹ BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

² Per the Highway Capacity Manual (6th Edition), 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 LOS = Level of Service

⁵ At the time field review was conducted, the eastbound and westbound left turn lanes were under construction. However, these lanes have since been completed. This analysis identifies the LOS results with the current left turn lanes in place.

⁶ Although at the time of the field review and traffic counts this intersection was operating as a cross-street stop controlled intersection, it is our understanding that the I-15 Northbound Ramps currently operates as an all-way stop.

⁷ For buildout conditions, the intersection is evaluated with a traffic signal, an eastbound right-turn pocket and striping the northbound approach to a left turn and right turn lane.

⁸ The two intersections of Tereticornis Avenue and Carmela Court are in close proximity to the existing Temescal Canyon High School on El Toro Road and have been evaluated with the AM existing peak hour factor from the raw count worksheet and also with a normalized peak hour factor of 0.92. Lower peak hour factors during the AM peak hour (morning drop-off) occur near schools due to the peak 10-15 minute traffic flows during the AM peak hour, which are much higher in comparison to the other 15-minute periods within the hour.

⁹ PHF = Peak Hour Factor

(Urban Crossroads, 2018c, Table 9-1)

☐ EAPC (2021) Intersection Operations Analysis

As shown in Table 4.16-30, there are no additional intersections are anticipated to operate at unacceptable LOS for EAPC (2021) traffic conditions, in addition to those previously identified under EAPC (2020) traffic conditions. Thus, consistent with the analysis presented above for EAPC (2020) conditions, the Project would contribute to, but would not directly cause, a deficient LOS at the following locations; thus, Project impacts to the following locations would represent cumulatively-considerable impacts of the proposed Project under EAPC (2021) conditions:

- Lake Street & Nichols Road (#1) – LOS F PM peak hour only
- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours



- Collier Avenue & Nichols Road (#6) – LOS F PM peak hour only
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)
- El Toro Road & Carmela Court (#18) – LOS E PM peak hour only (with normalized PHF)
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

A summary of the peak hour intersection LOS for EAPC (2021) traffic conditions are shown on Exhibit 9-5 of the Project's TIA (*Technical Appendix L*). The intersection operations analysis worksheets for EAPC (2021) traffic conditions are included in Appendix 9.2 of the TIA. (Urban Crossroads, 2018c, p. 161)

□ EAPC (2024) Intersection Operations Analysis

As shown in Table 4.16-30, the following intersection would operate at a deficient LOS with the addition of Project traffic under EAPC (2024) conditions. This intersection operates at an acceptable LOS under EA (2024) and was previously shown to be impacted with the addition of Project traffic under EAP (2024) conditions; thus, the deficient LOS is a direct result of Project traffic. Accordingly, the Project would result in a direct impact to the following intersection under EAPC (2024) conditions:

- I-15 Southbound Ramps & Nichols Road (#9) – LOS F AM and PM peak hours

As shown in Table 4.16-30, the following intersections would operate at a deficient LOS under EAPC (2024) conditions. As previously shown in Table 4.16-26, the following intersections were shown to operate at an acceptable LOS under EA (2024) and EAP (2024) conditions. Thus, the projected LOS deficiencies at the following intersections are the result of cumulative development traffic. Because the Project would contribute to but would not directly cause the LOS deficiencies, Project impacts at the following intersections would be cumulatively considerable under EAPC (2024) conditions:

- Alberhill Ranch Road & Nichols Road (#3) – LOS F AM and PM peak hours
- Collier Avenue & Riverside Drive (SR-74) (#7) – LOS E PM peak hour only
- Cambern Avenue & Central Avenue (SR-74) (#20) – LOS E AM and PM peak hours

As shown previously in Table 4.16-26, the following intersection would operate at a deficient LOS under EA (2024) conditions. Thus, because the Project would contribute to, but would not directly cause the projected deficiency, Project impacts to the following intersection would be cumulatively considerable under EAPC (2024) conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM and PM peak hours

Additionally, and consistent with EAPC (2020) and EAPC (2021) conditions, the Project would contribute to, but would not directly cause, the projected LOS deficiencies at the following locations; thus, Project impacts to the following intersections would be cumulatively considerable under EAPC (2024) conditions:

- Lake Street & Nichols Road (#1) – LOS F PM peak hour only



- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- Collier Avenue & Nichols Road (#6) – LOS F PM peak hour only
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)
- El Toro Road & Carmela Court (#18) – LOS E PM peak hour only (with normalized PHF)
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

A summary of the peak hour intersection LOS for EAPC (2024) traffic conditions are shown on Exhibit 9-6 of the Project's TIA (*Technical Appendix L*). The intersection operations analysis worksheets for EAPC (2024) traffic conditions are included in Appendix 9.3 of the TIA. (Urban Crossroads, 2018c, p. 161)

4. Traffic Signal Warrants Analysis – EAPC Conditions

The intersection of Alberhill Ranch Road and Nichols Road (#3) is anticipated to meet the traffic signal warrant under EAPC (2021) traffic conditions, in addition to those intersections previously warranted under Existing (2018), E+P, and EAP traffic conditions (see Appendices 9.4, 9.5, and 9.6, respectively, of the Project's TIA [*Technical Appendix L*]). However, as shown in Table 4.16-30 LOS C during both peak hours under EAPC (2021) conditions; thus, Project impacts due to the need to signalize the intersection of Alberhill Ranch Road and Nichols Road (#3) would be less than significant under EAPC (2021) conditions. However, under EAPC (2024) conditions, the LOS would be LOS F during both peak hours; thus, because the need for signalization is the result of cumulative development traffic, impacts due to the need to signalize the intersection of Alberhill Ranch Road and Nichols Road (#3) would be cumulatively considerable under EAPC (2024) conditions. (Urban Crossroads, 2018c, p. 161)

Consistent with EAP conditions, the Project would contribute to the need for signalization at the following intersections, but would not directly cause the need; thus, Project impacts due to the need to signalize the following intersections would be cumulatively considerable under EAPC (2020), EAPC (2021), and/or EAPC (2024) conditions as follows:

- Collier Avenue & Nichols Road (#6) – EAPC (2021) and EAPC (2024)
- I-15 Southbound Ramps & Nichols Road (#9) – EAPC (2024) only
- I-15 Northbound Ramps & Nichols Road (#10) – EAPC (2020), EAPC (2021), and EAPC (2024)
- El Toro Road & Carmela Court (#18) – EAPC (2020), EAPC (2021), and EAPC (2024)

5. Off-Ramp Queuing Analysis – EAPC Conditions

A queuing analysis was performed for the off-ramps at the I-15 Freeway and Nichols 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-15 Freeway mainline. Queuing analysis findings are presented in Table 4.16-31, *Peak Hour Freeway Off-Ramp Queuing Summary for EAPC Conditions*, for EAPC traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 4.16-31, there are no movements anticipated to experience queuing issues for EAPC (2020) and EAPC (2021) traffic conditions.



Table 4.16-31 Peak Hour Freeway Off-Ramp Queuing Summary for EAPC Conditions

Intersection	Movement	Available Stacking Distance (Feet)	EAPC (2020)				EAPC (2021)				EAPC (2024)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-15 SB Off-Ramp & Nichols Rd.	SBL/T/R	1,600	523	73	Yes	Yes	643	538	Yes	Yes	1,743	235	No	Yes
I-15 NB Off-Ramp & Nichols Rd.	NBL/T/R	1,530	878	358	Yes	Yes	1,163	658	Yes	Yes	2,178	1,588	No	No

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided (Urban Crossroads, 2018c, Table 9-2)

The following movements are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAPC (2024) traffic conditions:

- I-15 Freeway Southbound Off-ramp at Nichols Road (#1): Shared southbound left-through-right turn lane during the AM peak hour only
- I-15 Freeway Northbound Off-ramp at Nichols Road (#2): Shared northbound left-through-right turn lane during the AM peak hour only

As previously shown in Table 4.16-27, the I-15 Freeway Southbound Off-ramp at Nichols Road (#1) would not experience queuing issues under EA (2024) or EAP (2024) conditions; thus, the queuing issues are due to cumulative development traffic and Project impacts to this queuing location would be cumulatively considerable under EAPC (2024) conditions. The queuing issues anticipated at the I-15 Freeway Northbound Off-ramp at Nichols Road (#2) would occur as a result of Project traffic; thus, the Project would result in direct impacts to this queuing location under EAPC (2024) conditions.

Worksheets for EAPC (2020), EAPC (2021), and EAPC (2024) conditions off-ramp queuing analysis are provided in Appendices 9.7, 9.8, and 9.9, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 166)

6. Basic Freeway Segment Analysis – EAPC Conditions

EAPC (2020), EAPC (2021), and EAPC (2024) mainline directional volumes for the weekday AM and PM peak hours are provided on Exhibits 9-5 and 9-6, respectively, of the Project's TIA (*Technical Appendix L*). As shown on Table 4.16-32, *Basic Freeway Segment Analysis for EAPC Conditions*, the following basic freeway segments are anticipated to operate at an unacceptable LOS for EAPC (2020) traffic conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

Consistent with the conclusion reached for EAP (2024) conditions, the Project would contribute traffic to the above-listed facilities, but would not directly cause the projected deficiencies; thus, Project impacts to the above-listed freeway segments would be cumulatively considerable under EAPC (2024) conditions.



Table 4.16-32 Basic Freeway Segment Analysis for EAPC Conditions

Freeway	Direction	Mainline Segment	Lanes ¹	EAPC (2020)				EAPC (2021)				EAPC (2024)			
				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-15 Freeway	Southbound	North of Nichols Rd.	3	28.3	35.1	D	E	29.3	36.9	D	E	32.9	42.8	D	E
		South of Nichols Rd.	3	29.6	36.2	D	E	30.9	38.0	D	E	35.2	44.6	E	E
	Northbound	North of Nichols Rd.	3	23.2	17.6	C	B	24.1	18.1	C	C	26.6	19.8	D	C
		South of Nichols Rd.	3	23.7	18.2	C	C	24.5	18.9	C	C	27.2	21.0	D	C

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

(Urban Crossroads, 2018c, Table 9-3)

EAPC (2020), EAPC (2021), and EAPC (2024) basic freeway segment analysis worksheets are provided in Appendices 9.10, 9.11, and 9.12, respectively, of the Project's TIA.

7. Freeway Merge/Diverge Analysis – EAPC Conditions

Ramp merge and diverge operations were also evaluated for EAPC conditions and the results of this analysis are presented in Table 4.16-33, *Freeway Ramp Junction Merge/Diverge Analysis for EAPC Conditions*. As shown in Table 4.16-33, the following ramp merge/diverge segment is anticipated to operate at an unacceptable LOS during one or more peak hours under EAPC (2020) traffic conditions: (Urban Crossroads, 2018c, p. 166)

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

The above-listed merge/diverge location was previously shown to operate at a deficient LOS under EA (2020) conditions (refer to Table 4.16-21); thus, Project impacts to the above-listed merge/diverge location would be cumulatively considerable under EAPC (2020), EAPC (2021), and EAPC (2024) conditions.

The following merge/diverge location was shown to operate at an acceptable LOS under EAP (2024) conditions; thus, the deficient LOS under EAPC (2024) conditions is the result of cumulative development traffic. Accordingly, Project impacts to the following merge/diverge location would be cumulatively considerable under EAPC (2024) conditions:

- I-15 Freeway Southbound, On-Ramp at Nichols Road (#2) – LOS E PM peak hour only

There are no additional ramp merge/diverge segments anticipated to operate at an unacceptable LOS during one or more peak hours under EAPC (2021) and EAPC (2024) traffic conditions.



Table 4.16-33 Freeway Ramp Junction Merge/Diverge Analysis for EAPC Conditions

Freeway	Direction	Ramp or Segment	Lanes on Freeway ¹	EAPC (2020)				EAPC (2021)				EAPC (2024)			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³	Density ²	LOS ³
I-15 Freeway	Southbound	Off-Ramp at Nichols Rd.	3	28.5	D	32.8	E	29.2	D	33.9	E	31.7	D	36.8	E
		On-Ramp at Nichols Rd.	3	31.4	D	36.6	D	32.6	D	38.0	D	36.2	D	42.9	E
	Northbound	On-Ramp at Nichols Rd.	3	25.4	C	19.5	B	26.3	C	20.1	B	28.6	C	21.7	C
		Off-Ramp at Nichols Rd.	3	24.9	D	19.7	C	25.5	D	20.4	C	27.9	D	22.7	C

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

(Urban Crossroads, 2018c, Table 9-4)

EAPC (2020), EAPC (2021), and EAPC (2024) freeway ramp junction operations analysis worksheets are provided in Appendices 9.13, 9.14, and 9.15, respectively, of the Project's TIA (*Technical Appendix L*). (Urban Crossroads, 2018c, p. 173)

H. Project Impacts due to a Conflict with Policies Related to Transit, Roadway, and Pedestrian Facilities

As described in subsection 4.16.3, although the Project area is served by the RTA, there are currently no existing bus routes that serve the Project site (see TIA Exhibit 3-8, included as EIR *Technical Appendix L*). The closest transit lines run along the I-15 Freeway, Nichols Road to the west of the I-15 Freeway, Collier Avenue, Riverside Avenue (SR-74), and Central Avenue (SR-74). The proposed Project does not include any components that would impede operation of bus service and would therefore not decrease the performance or safety of such facilities.

There are currently no trails on the Project site and no designated bicycle lanes occur along Nichols Road or Wood Mesa Court adjacent to the Project site. Figure 2.5 of the Lake Elsinore General Plan designates a Class II bike lane along Nichols Road. The Project would implement a Class II bike lane along the southern edge of Nichols Road along the Project's frontage, while the Class II bike lane along the northern edge of the roadway would be constructed in the future by others. Accordingly, the Project would not conflict with Figure 2.5 of the General Plan, and impacts would be less than significant.

Figure 2.6 of the Lake Elsinore General Plan designates a Regional Trail along Nichols Road, with a County Regional Trail shown in the southern portions of the Project site. The Project would provide on-site trails in a general alignment consistent with that shown on Figure 2.6 of the General Plan. Although the Project would not construct the Regional Trail segment along Nichols Road, it is anticipated that this Regional Trail segment would occur along the northern edge of the roadway and would be constructed in the future by others. Accordingly, the Project would not conflict with General Plan Figure 2.6.



The proposed Project is designed to encourage pedestrian movement and enhance connectivity within the Project site through the incorporation of trails and sidewalk connections throughout the Project site. Furthermore, the City of Lake Elsinore Planning Division conducted a review of the proposed Project, and determined that the Project would comply with, or otherwise would not conflict with, policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities. Additionally, the Project has no potential to otherwise decrease the performance or safety of public transit, bikeways, or pedestrian facilities. As such, impacts would be less than significant and no mitigation is required.

Threshold b. Would the Project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

The Riverside County CMP is applicable to the proposed Project because the Project would contribute traffic to CMP-designated facilities. CMP facilities within the Project's study area include intersections with I-15 and SR-74; I-15 freeway mainlines; I-15 off-ramp queuing locations; and I-15 merge/diverge locations. Project impacts to CMP facilities were fully evaluated under the analysis of Threshold a., above, and are summarized below.

□ EAP (2020) Conditions

Under EAP (2020) conditions, the Project would result in a cumulatively-considerable impact at the following CMP intersections:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM peak hour only

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the intersection under EAP (2020) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any direct or cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAP (2020) conditions

The Project would result in a cumulatively-considerable impact to the following freeway segment under EAP (2020) conditions:

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAP (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only



□ EAP (2021) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAP 2021 conditions:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the intersection under EAP (2021) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any direct or cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAP (2021) conditions

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAP (2021) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAP (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAP (2024) Conditions

The addition of Project traffic to the following CMP intersection would represent a direct impact under EAP 2024 conditions:

- I-15 Southbound Ramps & Nichols Road (#9) – LOS F AM peak hour, LOS E PM peak hour

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAP 2024 conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM peak hour only
- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours

The Project also would result in a cumulatively-considerable impact at the following CMP facilities due to the need for signalization of the intersections under EAP (2024) conditions:



- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)

The Project would result in a direct impact due to off-ramp queuing deficiencies under EAP (2024) conditions at the following location:

- I-15 Northbound off-ramp at Nichols Road (#2)

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAP (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAP (2024) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAPC (2020) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAPC 2020 conditions:

- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the following intersection under EAPC (2020) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any direct or cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAPC (2020) conditions

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAPC (2020) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only



The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAPC (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAPC (2021) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAPC 2021 conditions:

- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the following intersection under EAPC (2021) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any direct or cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAPC (2021) conditions.

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAPC (2021) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAPC (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAPC (2024) Conditions

The addition of Project traffic to the following CMP intersection would represent a direct impact under EAPC 2024 conditions:

- I-15 Southbound Ramps & Nichols Road (#9) – LOS F AM and PM peak hours

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAPC 2024 conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM and PM peak hours



- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- Collier Avenue & Riverside Drive (SR-74) (#7) – LOS E PM peak hour only
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only
- Cambern Avenue & Central Avenue (SR-74) (#20) – LOS E AM and PM peak hours

The Project also would result in a cumulatively-considerable impact at the following CMP facilities due to the need for signalization of the following intersections under EAPC (2024) conditions:

- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)

The Project would result in a direct impact due to off-ramp queuing deficiencies under EAP (2024) conditions at the following location:

- I-15 Freeway Northbound Off-ramp at Nichols Road (#2)

The Project also would result in cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAP (2024) conditions at the following locations:

- I-15 Freeway Southbound Off-ramp at Nichols Road (#1): Shared southbound left-through-right turn lane during the AM peak hour only

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAPC (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E during both peak hours

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge locations under EAPC (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, On-Ramp at Nichols Road (#2) – LOS E PM peak hour only

Threshold c. Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project proposes a network of internal roadways that would be constructed within the Project site. During the City's review process for the Project's proposed Specific Plan and Tentative Tract Map, the City of Lake Elsinore reviewed the proposed design plans to ensure that no hazardous roadway features would be implemented. On the contrary, the Project would provide a new point of connection between Nichols Road and the north-south aligned segment of El Toro Road, which would reduce traffic along the existing east-west



oriented segment of El Toro Road and would provide for a more efficient and safe connection between Nichols Road and El Toro Road. The proposed Project would not include any components that would result in incompatible uses on roadways, including heavy equipment, etc. Accordingly, the proposed Project would not create or substantially increase safety hazards due to a geometric design feature or incompatible use. Impacts associated with this issue would be less than significant.

Threshold d. Would the Project result in inadequate emergency access?

The Project proposes a network of internal roadways that would be constructed within the Project site to City standards. During the City's review of the Project's proposed Specific Plan and Tentative Tract Map, the City reviewed the proposed design plans to ensure that adequate emergency access would be available at the site. Furthermore, the proposed connection between Nichols Road and El Toro Road via proposed B Street would improve emergency access in the local area by providing a more direct connection between Nichols Road and El Toro Road, thereby improving access to the Temescal Canyon High School. Accordingly, the proposed Project would not result in inadequate emergency access during long-term operation of the Project and impacts would be less than significant.

Due to temporary lane closures that may occur during the Project's construction phase, Project-related construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements to Nichols Road and the proposed connection to El Toro Road via B Street. Project-related construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan during construction, out of an abundance of caution, a significant impact is identified. Accordingly, near-term impacts to emergency access would be significant prior to mitigation.

4.16.8 CUMULATIVE IMPACT ANALYSIS

Cumulative impacts associated with transportation and traffic were evaluated in the preceding subsection (subsection 4.16.7). A summary of the impacts identified therein is provided below. Direct impacts are identified in Subsection 4.15.7 and are not listed below. Additionally, impacts that were shown to be less than significant in subsection 4.16.7 are not discussed below.

A. *Threshold a.*

Provided below is a summary of the cumulatively-considerable impacts that were identified for the proposed Project during each phase as part of the analysis presented in subsection 4.16.7.

Intersection Operations Analysis – EAP 2020 Conditions

The addition of Project traffic to the following intersections would represent cumulatively-considerable impacts under EAP 2020 conditions:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM peak hour only



- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only

Traffic Signal Warrants – EAP 2020 Conditions

The following intersections meet traffic signal warrants for Existing (2018) traffic conditions; therefore, the addition of Project traffic to the following intersections represent cumulatively-considerable impacts of the proposed Project under EAP (2020) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

Off-Ramp Queuing Analysis – EAP 2020 Conditions

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAP (2020) traffic conditions; therefore, cumulatively-considerable impacts would not occur.

Basic Freeway Segment Analysis – EAP 2020 Conditions

The following freeway segment was shown to operate at a deficient LOS under both EA and EAP (2020) traffic conditions; therefore, Project impacts to the following freeway segment would be cumulatively considerable under EAP 2020 conditions:

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

Freeway Merge/Diverge Analysis – EAP 2020 Conditions

The following freeway merge/diverge location would operate at a deficient LOS without the addition of Project traffic; thus, Project impacts to the following freeway merge/diverge location would be cumulatively considerable under EAP (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

Intersection Operations Analysis – EAP 2021 Conditions

The Project would contribute to, but would not directly cause, a deficient LOS at the following intersection; thus, Project impacts to the following intersection would be cumulatively considerable under EAP (2021) conditions.

- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)

As previously indicated, the following intersections were shown to operate at a deficient LOS for Existing (2018) conditions. Therefore, the addition of Project traffic to the following facilities would represent cumulatively-considerable impacts of Phase 2 (EAP 2021 conditions) of the proposed Project:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours



- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only

Traffic Signal Warrants – EAP 2021 Conditions

As previously indicated, the following intersections meet traffic signal warrants for Existing (2018) traffic conditions and would operate at a deficient LOS under EAP (2021) conditions; therefore, the addition of Project traffic to the following intersections represent cumulatively-considerable impacts of the proposed Project under EAP (2021) conditions:

- Collier Avenue & Nichols Road (#6)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

Off-Ramp Queuing Analysis – EAP 2021 Conditions

There are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAP (2021) traffic conditions; therefore, no impacts would occur.

Basic Freeway Segment Analysis – EAP 2021 Conditions

The following freeway segment would operate at a deficient LOS under EA (2021) conditions; thus, the addition of Project traffic to the following freeway segment represents a cumulatively-considerable impact of the proposed Project:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only

Additionally, and as previously noted, the following freeway segment was shown to operate at a deficient LOS under EA (2020) conditions; thus, the addition of Project traffic to the following freeway segment also represents a cumulatively-considerable impact of the proposed Project under EAP (2021) conditions:

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

Freeway Merge/Diverge Analysis – EAP 2021 Conditions

There are no additional ramp merge/diverge junction areas anticipated to operate at an unacceptable LOS during the peak hours for EA and EAP (2021) traffic conditions, in addition to the location previously identified under EA (2020) traffic conditions. As previously indicated, the following freeway merge/diverge analysis location would operate at a deficient LOS under EA (2020) conditions; thus, the addition of Project traffic to the following merge/diverge location represents a cumulatively-considerable impact under EAP (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only



Intersection Operations Analysis – EAP 2024 Conditions

The Project would contribute to but would not directly cause the deficiency at the following intersection; thus, the Project's impacts to the following intersection would be cumulatively considerable under EAP (2024) conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM peak hour only

The addition of Project traffic to the following intersections that were shown to be impacted under EA and/or EAP (2021) conditions also would represent cumulatively-considerable impacts of the proposed Project under EAP (2024) conditions:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- Collier Avenue & Nichols Road (#6) – LOS E AM peak hour and LOS F PM peak hour
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Tereticornis Avenue (#17) – LOS F AM peak hour only (with normalized PHF)
- El Toro Road & Carmela Court (#18) – LOS F AM peak hour only (with normalized PHF)

Traffic Signal Warrants – EAP 2024 Conditions

No additional study area intersections are anticipated to meet traffic signal warrants for EA and EAP (2024) traffic conditions in addition to those previously warranted under Existing traffic conditions. As previously indicated, the following intersections meet traffic signal warrants for Existing (2018) traffic conditions; therefore, the addition of Project traffic to the following intersections represent cumulatively-considerable impacts of the proposed Project under EAP (2024) conditions (Urban Crossroads, 2018c, p. 60):

- Collier Avenue & Nichols Road (#6)
- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

Off-Ramp Queuing Analysis – EAP 2024 Conditions

Although the Project would result in direct impacts to the queuing location of I-15 Northbound off-ramp at Nichols Road under EAP (2024) conditions, the Project would not result in any cumulatively-considerable impacts to any off-ramp queuing locations under EAP (2024) conditions.

Basic Freeway Segment Analysis – EAP 2024 Conditions

There are no additional freeway segments anticipated to operate at an unacceptable LOS under EA and EAP (2024) traffic conditions, in addition to those previously identified under EA and EAP (2021) traffic conditions. The Project would contribute traffic to the following freeway segments that were previously-identified as being cumulatively impacted by the Project; thus, Project impacts to the following freeway mainline segments would be cumulatively considerable under EAP (2024) conditions:



- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

Freeway Merge/Diverge Analysis – EAP 2024 Conditions

There are no additional ramp merge/diverge segments anticipated to operate at an unacceptable LOS under EA and EAP (2024) traffic conditions, in addition to those previously identified under EA (2021) traffic conditions. The following freeway merge/diverge location was shown to operate at a deficient LOS under EA (2021) conditions; thus, Project impacts to the following freeway merge/diverge location would be cumulatively considerable under EAP (2024) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

Intersection Operations Analysis – EAPC Conditions

□ EAPC 2020 Conditions

Impacts to the following intersections are the result of cumulative development traffic; therefore, Project impacts to the following intersections would be cumulatively considerable under EAPC (2020) conditions:

- Lake Street & Nichols Road (#1) – LOS F PM peak hour only
- Collier Avenue & Nichols Road (#6) – LOS F PM peak hour only
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

The Project would contribute to but would not directly cause the following LOS deficiencies, which were shown to be deficient LOS under EA (2020) conditions; thus, Project impacts at the following intersections would be cumulatively considerable under EAPC (2020) conditions:

- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Carmela Court (#18) – LOS E PM peak hour only (with normalized PHF)

The following intersection would operate at an acceptable LOS under EAP (2020) conditions, but would degrade to an unacceptable LOS with the addition of cumulative traffic under EAPC (2020) conditions; therefore, Project impacts to the following intersection would be cumulatively considerable under EAPC (2020) conditions.

- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)

□ EAPC 2021 Conditions

Consistent with the analysis presented above for EAPC (2020) conditions, the Project would contribute to, but would not directly cause, a deficient LOS at the following locations; thus, Project impacts to the following locations would represent cumulatively-considerable impacts of the proposed Project under EAPC (2021) conditions:



- Lake Street & Nichols Road (#1) – LOS F PM peak hour only
- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- Collier Avenue & Nichols Road (#6) – LOS F PM peak hour only
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)
- El Toro Road & Carmela Court (#18) – LOS E PM peak hour only (with normalized PHF)
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

□ **EAPC 2024 Conditions**

The following intersections were shown to operate at an acceptable LOS under EA (2024) and EAP (2024) conditions. Thus, the projected LOS deficiencies at the following intersections are the result of cumulative development traffic. Because the Project would contribute to but would not directly cause the LOS deficiencies, Project impacts at the following intersections would be cumulatively considerable under EAPC (2024) conditions:

- Alberhill Ranch Road & Nichols Road (#3) – LOS F AM and PM peak hours
- Collier Avenue & Riverside Drive (SR-74) (#7) – LOS E PM peak hour only
- Cambern Avenue & Central Avenue (SR-74) (#20) – LOS E AM and PM peak hours

The following intersection would operate at a deficient LOS under EA (2024) conditions. Thus, because the Project would contribute to, but would not directly cause the projected deficiency, Project impacts to the following intersection would be cumulatively considerable under EAPC (2024) conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM and PM peak hours

Consistent with EAPC (2020) and EAPC (2021) conditions, the Project would contribute to, but would not directly cause, the projected LOS deficiencies at the following locations; thus, Project impacts to the following intersections would be cumulatively considerable under EAPC (2024) conditions:

- Lake Street & Nichols Road (#1) – LOS F PM peak hour only
- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- Collier Avenue & Nichols Road (#6) – LOS F PM peak hour only
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- El Toro Road & Tereticornis Avenue (#17) – LOS D AM peak hour only (with normalized PHF)
- El Toro Road & Carmela Court (#18) – LOS E PM peak hour only (with normalized PHF)
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

Traffic Signal Warrants – EAPC Conditions

Because the need for signalization of the intersection of Alberhill Ranch Road and Nichols Road is the result of cumulative development traffic, Project impacts due to the need to signalize this intersection would be



cumulatively considerable under EAPC (2021) conditions. No additional warrants have been met under EAPC (2020) or EAPC (2024).

Consistent with EAP (2024) conditions, the Project would contribute to the need for signalization at the following intersections, but would not directly cause the need; thus, Project impacts due to the need to signalize the following intersections would be cumulatively considerable under EAPC (2024) conditions:

- Collier Avenue & Nichols Road (#6)
- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)
- El Toro Road & Carmela Court (#18)

Off-Ramp Queuing Analysis – EAPC Conditions

There are no movements anticipated to experience queuing issues for EAPC (2020) and EAPC (2021) traffic conditions. In addition to the Project's direct impact to the I-15 Freeway Northbound Off-ramp at Nichols Road (#2), the following movements are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAPC (2024) traffic conditions:

- I-15 Freeway Southbound Off-ramp at Nichols Road (#1): Shared southbound left-through-right turn lane during the AM peak hour only

The I-15 Freeway Southbound Off-ramp at Nichols Road (#1) would not experience queuing issues under EA (2024) or EAP (2024) conditions; thus, the queuing issues are due to cumulative development traffic and Project impacts to this queuing location would be cumulatively considerable under EAPC (2024) conditions.

Basic Freeway Segment Analysis – EAPC Conditions

The following basic freeway segments are anticipated to operate at an unacceptable LOS for EAPC (2020) traffic conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

Consistent with the conclusion reached for EAP (2024) conditions, the Project would contribute traffic to the above-listed facilities, but would not directly cause the projected deficiencies; thus, Project impacts to the above-listed freeway segments would be cumulatively considerable under EAPC (2024) conditions.

Freeway Merge/Diverge Analysis – EAPC Conditions

The following ramp merge/diverge segment is anticipated to operate at an unacceptable LOS during one or more peak hours under EAPC (2020) traffic conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only



The above-listed merge/diverge location was previously shown to operate at a deficient LOS under EA (2020) conditions; thus, Project impacts to the above-listed merge/diverge location would be cumulatively considerable under EAPC (2020), EAPC (2021), and EAPC (2024) conditions.

The following merge/diverge location was shown to operate at an acceptable LOS under EAP (2024) conditions; thus, the deficient LOS under EAPC (2024) conditions is the result of cumulative development traffic. Accordingly, Project impacts to the following merge/diverge location would be cumulatively considerable under EAPC (2024) conditions:

- I-15 Freeway Southbound, On-Ramp at Nichols Road (#2) – LOS E PM peak hour only

There are no additional ramp merge/diverge segments anticipated to operate at an unacceptable LOS during one or more peak hours under EAPC (2021) and EAPC (2024) traffic conditions.

Conflicts with Policies Related to Transit, Roadway, and Pedestrian Facilities

The proposed Project would not impede operation of bus service, would accommodate planned bicycle facilities as planned by the General Plan and NRSP, and would accommodate trails on site in conformance with Figure 2.6 of the Lake Elsinore General Plan. Other cumulative developments would similarly be required to accommodate transit, roadway, and pedestrian facilities to encourage alternative modes of transportation. As such, the Project's impacts would be less-than-cumulatively considerable.

B. Threshold b.

The following provides a summary of the Project's cumulatively-considerable impacts to CMP facilities under each phase and scenario analyzed for the Project. The Project's direct impacts are not listed below.

□ EAP (2020) Conditions

Under EAP (2020) conditions, the Project would result in a cumulatively-considerable impact at the following CMP intersections:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM peak hour only

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the intersection under EAP (2020) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAP (2020) conditions



The Project would result in a cumulatively-considerable impact to the following freeway segment under EAP (2020) conditions:

- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAP (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAP (2021) Conditions

The addition of Project traffic to the following CMP intersection would represent cumulatively-considerable impacts under EAP 2021 conditions:

- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the intersection under EAP (2021) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAP (2021) conditions

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAP (2021) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAP (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAP (2024) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAP 2024 conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM peak hour only
- Gunnerson Street/Strickland Avenue & Riverside Drive (#5) – LOS F AM and PM peak hours



- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours

The Project also would result in a cumulatively-considerable impact at the following CMP facilities due to the need for signalization of the intersections under EAP (2024) conditions:

- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)

The Project would result in a direct impact to the off-ramp queuing location under EAP (2024) conditions:

- I-15 Southbound Off-Ramp at Nichols Road (#2)

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAP (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAP (2024) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAPC (2020) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAPC 2020 conditions:

- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the following intersection under EAPC (2020) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAPC (2020) conditions

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAPC (2020) conditions:



- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAPC (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAPC (2021) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAPC 2021 conditions:

- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only

The Project also would result in a cumulatively-considerable impact at the following CMP facility due to the need for signalization of the following intersection under EAPC (2021) conditions:

- I-15 Northbound Ramps & Nichols Road (#10)

The Project would not result in any cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAPC (2021) conditions.

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAPC (2021) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge location under EAPC (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

□ EAPC (2024) Conditions

The addition of Project traffic to the following CMP intersections would represent cumulatively-considerable impacts under EAPC 2024 conditions:

- Lakeshore Drive & Riverside Drive (SR-74) (#4) – LOS E AM and PM peak hours
- Gunnerson Street/Strickland Avenue (#5) – LOS F AM and PM peak hours
- Collier Avenue & Riverside Drive (SR-74) (#7) – LOS E PM peak hour only



- I-15 Northbound Ramps & Nichols Road (#10) – LOS F AM and PM peak hours
- Dexter Avenue & Central Avenue (SR-74) (#19) – LOS E PM peak hour only
- Cambern Avenue & Central Avenue (SR-74) (#20) – LOS E AM and PM peak hours

The Project also would result in a cumulatively-considerable impact at the following CMP facilities due to the need for signalization of the following intersections under EAPC (2024) conditions:

- I-15 Southbound Ramps & Nichols Road (#9)
- I-15 Northbound Ramps & Nichols Road (#10)

The Project would result in cumulatively-considerable impacts due to off-ramp queuing deficiencies under EAPC (2024) conditions at the following location:

- I-15 Freeway Southbound Off-ramp at Nichols Road (#1): Shared southbound left-through-right turn lane during the AM peak hour only

The Project would result in a cumulatively-considerable impact to the following freeway segments under EAPC (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E during both peak hours

The Project also would result in cumulatively-considerable impacts due to a deficient LOS at the following freeway merge/diverge locations under EAPC (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, On-Ramp at Nichols Road (#2) – LOS E PM peak hour only

C. Threshold c.

As detailed under the discussion of Threshold c., the proposed Project would not create or substantially increase safety hazards due to a design feature or incompatible use. All Project-related construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Accordingly, cumulatively-considerable impacts due to design features or incompatible uses would not occur.

D. Threshold d.

As noted under Threshold d., the Project would improve Nichols Road along its frontage, and would construct Street B between Nichols Road and the north-south aligned segment of El Toro Road. Although these improvements could temporarily disrupt traffic, any construction-related traffic impacts resulting from the Project would be addressed through the requirement to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although impacts during construction are anticipated to be less than significant, Mitigation Measure MM 4.16-1 has nonetheless



been identified to ensure Project compliance with the requirements to prepare and implement a traffic control plan during construction activities. Other projects that may be under construction simultaneous with the proposed Project similarly would be required to adhere to a traffic control plan. Furthermore, as shown previously on EIR Figure 4.0-1, there are no cumulative developments in close proximity to the Project site that could contribute to the Project's potential impacts to emergency access routes during construction activities. As a result, impacts during the Project's construction would be less-than-cumulatively considerable.

4.16.9 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a.: Significant Direct and Cumulatively-Considerable Impact. The proposed Project would result in direct and cumulatively-considerable impacts to study area facilities under each phase of the proposed Project. Table 4.16-34, *Summary of Project Intersection Impacts by Study Scenario*, provides a summary of the Project's direct and cumulatively-considerable impacts to study area intersections under each study scenario. Table 4.16-35, *Project Impacts Due to Signal Warrants by Study Scenario*, shows the Project's impacts due to traffic signal warrants for each study scenario. Table 4.16-36, *Project Impacts to Off-Ramp Queuing Locations by Study Scenario*, summarizes the Project's impacts to off-ramp queuing locations under each scenario. Table 4.16-37, *Project Impacts to Freeway Segments by Study Scenario*, shows the Project's impacts to freeway segments under each study scenario, while Table 4.16-38, *Project Impacts to Freeway Junction Merge/Diverge Locations by Study Scenario*, shows the Project's impacts to freeway junction merge/diverge locations for each study scenario. Additionally, the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities), and impacts would be less than significant.

Threshold b.: Significant Direct and Cumulatively-Considerable Impact. The Project would result in direct and cumulatively-considerable impacts to transportation facilities identified by the RCTC CMP as CMP facilities. Table 4.16-34 and Table 4.16-35 identify the study area intersections that are CMP facilities, and summarizes by study scenario the Project's impacts to intersections and traffic signal warrants, respectively. Table 4.16-36, Table 4.16-37, and Table 4.16-38 summarizes the Project's direct and cumulatively-considerable impacts to CMP off-ramp queuing locations, CMP freeway segments, and CMP freeway merge/diverge locations, respectively.

Threshold c.: Less-than-Significant Impact. The proposed Project would not create or substantially increase safety hazards due to a design feature or incompatible use, and impacts would be less than significant.

Threshold d.: Significant Direct Impact. Due to temporary lane closures that may occur during the Project's construction phase, Project-related construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements to Nichols Road and the proposed connection to El Toro Road via B Street. Project-related construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices. Although it is anticipated a less-than-significant impact would occur with the requirement to implement a temporary traffic control plan during construction, out of an abundance of caution, a significant impact is identified. Accordingly, near-term impacts to emergency access would be significant prior to mitigation.



Table 4.16-34 Summary of Project Intersection Impacts by Study Scenario

#	Intersection	CMP?	EAP 2020	EAP 2021	EAP 2024	EAPC 2020	EAPC 2021	EAPC 2024
1	Lake St. & Nichols Rd.	No	--	--	--	C*	C*	C*
2	Lake St. & Alberhill Ranch Rd.	No	--	--	--	--	--	--
3	Alberhill Ranch Rd. & Nichols Rd.	No	--	--	--	--	--	C*
4	Lakeshore Dr. & Riverside Dr. (SR-74)	Yes	--	--	C	--	--	C
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	Yes	C*	C*	C*	C*	C*	C*
6	Collier Av. & Nichols Rd.	No	--	D	C*	C	C*	C*
7	Collier Av. & Riverside Dr. (SR-74)	Yes	--	--	--	--	--	C*
8	Collier Av. & Central Av. (SR-74)	Yes	--	--	--	--	--	--
9	I-15 Southbound Ramps & Nichols Rd.	Yes	--	--	D	--	--	D
10	I-15 Northbound Ramps & Nichols Rd.	Yes	C**	C**	C**	C**	C**	C**
11	A St. & Nichols Rd.	No	--	--	--	--	--	--
12	B St. & Nichols Rd.	No	--	--	--	--	--	--
13	B St. & F St.	No	--	--	--	--	--	--
14	B St. & H St.	No	--	--	--	--	--	--
15	K St. and B St.	No	--	--	--	--	--	--
16	El Toro Rd. & B St.	No	--	--	--	--	--	--
17	E Toro Rd & Tereticornis Av.	No	-- ¹	C	C	C	C	C
18	El Toro Rd. & Carmela Ct.	No	C*	C*	C*	C*	C*	C*
19	Dexter Av. & Central Av. (SR-74)	Yes	--	--	--	C*	C*	C*
20	Cambern Av. & Central Av. (SR-74)	Yes	--	--	--	--	--	C*
21	Driveway 1 & Nichols Rd.	No	--	--	--	--	--	--

1. Although the intersection of El Toro Road and Tereticornis Avenue is anticipated to operate at an unacceptable LOS during the AM peak hour under EAP (2020) conditions, it is anticipated to operate at an acceptable LOS with a normalized PHF.

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

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

** = Mitigation is not available for these impacts beyond payment of TIF and/or TUMF fees; thus, impacts would be significant and unavoidable.



Table 4.16-35 Project Impacts Due to Signal Warrants by Study Scenario

#	Intersection	CMP?	EAP 2020	EAP 2021	EAP 2024	EAPC 2020	EAPC 2021	EAPC 2024
1	Lake St. & Nichols Rd.	No	--	--	--	--	--	--
2	Lake St. & Alberhill Ranch Rd.	No	--	--	--	--	--	--
3	Alberhill Ranch Rd. & Nichols Rd.	No	--	--	--	--	--	C*
4	Lakeshore Dr. & Riverside Dr. (SR-74)	Yes	--	--	--	--	--	--
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)	Yes	--	--	--	--	--	--
6	Collier Av. & Nichols Rd.	No	--	C*	C*	--	C*	C*
7	Collier Av. & Riverside Dr. (SR-74)	Yes	--	--	--	--	--	--
8	Collier Av. & Central Av. (SR-74)	Yes	--	--	--	--	--	--
9	I-15 Southbound Ramps & Nichols Rd.	Yes	--	--	C	--	--	C
10	I-15 Northbound Ramps & Nichols Rd.	Yes	C**	C**	C**	C**	C**	C**
11	A St. & Nichols Rd.	No	--	--	--	--	--	--
12	B St. & Nichols Rd.	No	--	--	--	--	--	--
13	B St. & F St.	No	--	--	--	--	--	--
14	B St. & H St.	No	--	--	--	--	--	--
15	K St. and B St.	No	--	--	--	--	--	--
16	El Toro Rd. & B St.	No	--	--	--	--	--	--
17	E Toro Rd & Tereticornis Av.	No	--	--	--	--	--	--
18	El Toro Rd. & Carmela Ct.	No	C*	C*	C*	C*	C*	C*
19	Dexter Av. & Central Av. (SR-74)	Yes	--	--	--	--	--	--
20	Cambern Av. & Central Av. (SR-74)	Yes	--	--	--	--	--	--
21	Driveway 1 & Nichols Rd.	No	--	--	--	--	--	--

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

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

** = Mitigation is not available for these impacts beyond payment of TIF and/or TUMF fees; thus, impacts would be significant and unavoidable.



Table 4.16-36 Project Impacts to Off-Ramp Queuing Locations by Study Scenario

Intersection	EAP 2020	EAP 2021	EAP 2024	EAPC 2020	EAPC 2021	EAPC 2024
I-15 SB Off-Ramp & Nichols Rd. (#1)	--	--	--	--	--	C**
I-15 NB Off-Ramp & Nichols Rd. (#2)	--	--	D**	--	--	D**

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

** = Mitigation is not available for these impacts beyond payment of TIF and/or TUMF fees; thus, impacts would be significant and unavoidable.

Table 4.16-37 Project Impacts to Freeway Segments by Study Scenario

Freeway	Direction	Mainline Segment	EAP 2020	EAP 2021	EAP 2024	EAPC 2020	EAPC 2021	EAPC 2024
I-15 Freeway	Southbound	North of Nichols Rd. (#1)	--	C**	C**	C**	C**	C**
		South of Nichols Rd. (#2)	C**	C**	C**	C**	C**	C**
	Northbound	North of Nichols Rd. (#3)	--	--	--	--	--	--
		South of Nichols Rd. (#4)	--	--	--	--	--	--

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

** = Mitigation is not available for these impacts beyond payment of TIF and/or TUMF fees; thus, impacts would be significant and unavoidable.



Table 4.16-38 Project Impacts to Freeway Junction Merge/Diverge Locations by Study Scenario

Freeway	Direction	Mainline Segment	EAP 2020	EAP 2021	EAP 2024	EAPC 2020	EAPC 2021	EAPC 2024
I-15 Freeway	Southbound	Off-Ramp at Nichols Rd. (#1)	C**	C**	C**	C**	C**	C**
		On-Ramp at Nichols Rd. (#2)	--	--	--	--	--	C**
	Northbound	On-Ramp at Nichols Rd. (#3)	--	--	--	--	--	--
		Off-Ramp at Nichols Rd. (#4)	--	--	--	--	--	--

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

** = Mitigation is not available for these impacts beyond payment of TIF and/or TUMF fees; thus, impacts would be significant and unavoidable.



4.16.10 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

The following are applicable regulations and design requirements within the City of Lake Elsinore. Although these requirements technically do not meet CEQA's definition for mitigation, they are identified herein to ensure Project compliance with applicable City regulations and design requirements. The following measures are included in the Project's conditions of approval:

- Prior to issuance of certificates of occupancy for each phase of the proposed development, the Project Applicant shall pay fees in accordance with Title 16, Chapter 16.74 (Development Impact Fees) of the City of Lake Elsinore Municipal Code.
- Prior to issuance of certificates of occupancy for each phase of the proposed development, the Project Applicant shall pay fees in accordance with Title 16, Chapter 16.83 (Western Riverside County Transportation Uniform Mitigation Fee Program) of the City of Lake Elsinore Municipal Code.

Mitigation for Construction-Related Impacts

MM 4.16-1 Prior to the issuance of grading permits or improvement plans affecting Nichols Road and/or El Toro Road/Wood Mesa Court, the Project Applicant shall prepare and the City of Lake Elsinore shall approve a temporary traffic control plan. The temporary traffic control plan shall comply with the applicable requirements of the California Manual on Uniform Traffic Control Devices. A requirement to comply with the temporary traffic control plan shall be noted on all grading and improvement plans and also shall be specified in bid documents issued to prospective construction contractors.

Mitigation for Phase 1 Direct and Cumulatively-Considerable Traffic Impacts

MM 4.16-2 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the City of Lake Elsinore, to be held in trust, for the following improvements to the intersection of Lake Street at Nichols Rd. (#1):

- Construct a second northbound through lane;
- Construct a second southbound through lane;
- Construct an eastbound left-turn lane; and
- Construct a westbound left turn lane.

The Project's fair share of the above-listed improvements is 0.3% for Phase 1 of the proposed Project.

MM 4.16-3 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore



for the following improvement to the intersection of Gunnerson Street/Strickland Avenue at Riverside Drive (SR-74) (#5):

- Install a traffic signal.

The Project's fair share of the above-listed improvements is 0.2% for Phase 1 of the proposed Project.

MM 4.16-4 Prior to issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall construct the following improvement at the intersection of Collier Av. At Nichols Rd. (#6):

- Convert the intersection to all-way stop (AWS) control.

MM 4.16-5 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall construct the following improvement to the intersection of El Toro Rd. at Tereticornis Av. (#17):

- Convert the intersection to all-way stop (AWS) control.

MM 4.16-6 Prior to the issuance of certificates of occupancy for Phase 1 of the proposed development, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the County of Riverside, to be held in trust, for the following improvements to the intersection of El Toro Rd. at Carmella Ct. (#18):

- Convert the intersection to all-way stop (AWS) control; and
- Remove a portion of on-street parking to provide a southbound right-turn lane.

The County of Riverside shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. If within five years of the date of collection of the Project Applicant's fair-share fee payment, the County of Riverside has not established a fair-share funding program for the required improvements, then the City of Lake Elsinore shall return the funds to the Project Applicant. The Project's fair share of the above-listed improvements is 22.7% for Phase 1 of the proposed Project.

Mitigation for Phase 2 Direct and Cumulatively-Considerable Traffic Impacts

MM 4.16-7 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvements to the intersection of Lake Street at Nichols Rd. (#1):

- Construct a second northbound through lane;



- Construct a second southbound through lane;
- Construct an eastbound left-turn lane; and
- Construct a westbound left turn lane.

The Project's fair share of the above-listed improvement is 1.2% for Phase 2 of the proposed Project, of which 0.3% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.16-2 and 0.9% shall be paid as part of Phase 2 development pursuant to this mitigation measure.

- MM 4.16-8 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Gunnerson Street/Strickland Avenue at Riverside Drive (SR-74) (#5):

- Install a traffic signal.

The Project's fair share of the above-listed improvements is 0.6% for Phase 2 of the proposed Project (in addition to the 0.2% required by Mitigation Measure MM 4.16-3 for Phase 1).

- MM 4.16-9 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Collier Avenue at Nichols Road (#6):

- Install a traffic signal.

The Project's fair share of the above-listed improvements is 9.6% for Phase 2 of the proposed Project.

- MM 4.16-10 Prior to the issuance of certificates of occupancy for Phase 2 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the County of Riverside, to be held in trust, for the following improvements to the intersection of El Toro Rd. at Carmella Ct. (#18):

- Convert the intersection to all-way stop (AWS) control; and
- Remove a portion of on-street parking to provide a southbound right-turn lane.

The County of Riverside shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. If within five years of the date of collection of the Project Applicant's fair-share fee payment, the County of Riverside has not established a fair-share funding program for the required improvements, then the County of Riverside shall return the funds to the Project Applicant. The Project's fair share of the above-listed improvements is 49.0% for



Phase 2 of the proposed Project, of which 22.7% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.16-6 and 26.3% shall be paid as part of Phase 2 development pursuant to this mitigation measure.

Mitigation for Phase 3 Direct and Cumulatively-Considerable Traffic Impacts

MM 4.16-11 Prior to the issuance of certificates of occupancy for Phase 3 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvements to the intersection of Lake Street at Nichols Rd. (#1):

- Construct a second northbound through lane;
- Construct a second southbound through lane;
- Construct an eastbound left-turn lane;
- Construct a westbound left turn lane;
- Construct a southbound right-turn lane; and
- Construct an eastbound right-turn lane.

The Project's fair share of the above-listed improvement is 6.8% for Phase 3 of the proposed Project. For the first four improvements listed above, 0.3% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.16-2, 0.9% shall be paid as part of Phase 2 development pursuant to Mitigation Measure MM 4.16-7, and 5.6% shall be paid as part of Phase 3 development pursuant to this mitigation measure. For the fifth and sixth improvements listed above, the Project Applicant shall contribute the full 6.8% towards the cost of the required improvements.

MM 4.16-12 Prior to the issuance of certificates of occupancy for Phase 3 of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore for the following improvement to the intersection of Alberhill Ranch Rd. at Nichols Rd. (#3):

- Install a traffic signal.

The Project's fair share of the above-listed improvement is 17.7% for Phase 3 of the proposed Project.

MM 4.16-13 Prior to the issuance of certificates of occupancy for Phase 3 of the proposed development, the Project Applicant shall construct the following improvement to the intersection of Lakeshore Dr. at Riverside Dr. (#4):

- Restripe the WB right turn lane to a WB shared through-right turn lane

MM 4.16-14 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City



of Lake Elsinore for the following improvement to the intersection of Gunnerson Street/Strickland Avenue at Riverside Drive (SR-74) (#5):

- Install a traffic signal.

The Project's fair share of the above-listed improvements is 4.4% for Phase 3 of the proposed Project (in addition to the 0.2% required by Mitigation Measure MM 4.16-3 for Phase 1 and the 0.6% required by Mitigation Measure MM 4.16-8 for Phase 2).

MM 4.16-15 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed development, the Project Applicant shall make a fair-share monetary contribution to the City of Lake Elsinore, to be held in trust, for the following improvement to the intersection of Collier Avenue at Nichols Road (#6):

- Install a traffic signal.

The Project's fair share of the above-listed improvements is 23.2% for Phase 3 of the proposed Project (in addition to the 9.6% required by Mitigation Measure MM 4.16-9 for Phase 2).

MM 4.16-16 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed development, the Project Applicant shall construct the following improvement to the intersection of the I-15 SB Ramps & Nichols Road (#9), with appropriate fee credits:

- Install a traffic signal.
- Add a SB left turn lane

MM 4.16-17 Prior to the issuance of certificates of occupancy for Phase 3 (buildout) of the proposed Project, the Project Applicant shall use reasonable efforts to make a fair-share monetary contribution to the County of Riverside, to be held in trust, for the following improvement to the intersection of El Toro Road at Carmela Court (#18):

- Convert the intersection to all-way stop (AWS) control;
- Remove a portion of on-street parking to provide a southbound right-turn lane;
- Implementation of a traffic guard at this intersection during the AM peak hour only during the peak AM period when students arrive at the Temescal Canyon High School; and
- Remove a portion of on-street parking to provide a northbound left-turn lane

The County of Riverside shall establish a fair-share funding program for these improvements and shall only use the funds paid by the Project Applicant for the purpose of implementing these improvements. If within five years of the date of collection of the Project Applicant's fair-share fee payment, the County of Riverside has not established a fair-share funding program for the required improvements, then the County of Riverside shall return the funds to



the Project Applicant. The Project's fair share of the above-listed improvements is 62.8%. For the first two improvements listed above, 22.7% shall be paid as part of Phase 1 pursuant to Mitigation Measure MM 4.16-6, 26.3% shall be paid as part of Phase 2 development pursuant to Mitigation Measure MM 4.16-10, and 13.8% shall be paid as part of Phase 3 development pursuant to this mitigation measure. For the third and fourth improvements listed above, the Project shall contribute the full 62.8% towards the costs of the required improvements. For the traffic guard, the fair share amount shall either be based on 62.8% of the total cost to establish a non-wasting endowment to pay for the required traffic guard on an on-going basis, or a fair-share annual payment to the County of Riverside shall be made by the Project's homeowners' association for the cost of the required traffic guard.

4.16.11 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a.: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Provided below is a summary of the significance of the Project's impacts to transportation and traffic following implementation of the City Regulations and Design Requirements and Mitigation Measures MM 4.16-1 through MM 4.16-17 (as applicable) for each phase of the proposed Project.

Phase 1 Conditions (EAP 2020 and EAPC 2020)

Intersections – EAP 2020 and EAPC 2020

As shown in Table 4.16-39, *Intersection Analysis for EAP (2020) Conditions with Improvements*, and Table 4.16-40, *Intersection Analysis for EAPC Conditions with Improvements*, improvements identified as part of TIF and/or TUMF would improve the LOS at the following intersections to acceptable levels. However, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 1 of the proposed Project; therefore, Project impacts to the following intersections would represent near-term significant and unavoidable impacts of the proposed Project for Phase 1 conditions prior to implementation of the required improvements:

- I-15 Northbound Ramps at Nichols Rd. (#10)
- Dexter Av. at Central Av. (SR-74) (#19)

As shown in Table 4.16-40, implementation of the improvements listed in Mitigation Measures MM 4.16-2, MM 4.16-3, and MM 4.16-6 would improve the LOS at the following intersections to acceptable levels under EAPC (2020) conditions. However, because the mitigation requires only fair share payments towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under EAPC (2020) conditions until the required improvements are in place:

- Lake St. at Nichols Rd. (#1)
- Gunnerson St./Strickland Av. at Riverside Drive (SR-74) (#5)
- El Toro Rd. at Carmela Ct. (#18)

As indicated in Table 4.16-40, implementation of Mitigation Measure MM 4.16-4 would improve the LOS at the intersection of Collier Av. at Nichols Rd. (#6) from LOS F to an acceptable LOS C during the PM peak hour. Therefore, implementation of the required mitigation would reduce the Project's impacts at this intersection to less-than-significant levels.

Table 4.16-39 Intersection Analysis for EAP (2020) Conditions with Improvements

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound				Southbound				Eastbound							
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)																	
	EA (2020)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	97.8	>100.0	F	F
	- With Improvements ^{4,5}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.1	9.1	A	A
	EAP (2020)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	99.9	>100.0	F	F
	- With Improvements ^{4,5}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.1	9.1	A	A
10	I-15 Northbound Ramps & Nichols Rd.																	
	EA (2020)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	35.3	F	E
	- With Improvements	<u>TS</u>	0	1	<u>1</u>	0	0	0	1	1	0	0	1	0	14.2	18.0	B	B
	EAP (2020)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	38.4	F	E
	- With Improvements	<u>TS</u>	0	1	<u>1</u>	0	0	0	1	1	0	0	1	0	14.4	18.3	B	B
18	El Toro Rd. & Carmela Ct.																	
	EA (2020)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	11.7	F	B
	- With Improvements ⁷	<u>AWS</u>	0	1	0	0	1	<u>1</u>	0	1	0	0	1	0	71.4	9.3	F	A
	- Without Improvements ⁶	CSS	0	1	0	0	1	0	0	1	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{6,7}	<u>AWS</u>	0	1	0	0	1	<u>1</u>	0	1	0	0	1	0	21.9	--	C	--
	EAP (2020)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	11.7	F	B
	- With Improvements ⁷	<u>AWS</u>	0	1	0	0	1	<u>1</u>	0	0	0	0	1	0	72.6	9.4	F	A
	- Without Improvements ⁶	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{6,7}	<u>AWS</u>	0	1	0	0	1	<u>1</u>	0	0	0	0	1	0	22.1	--	C	--

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 1 = Improvement

² Per the Highway Capacity Manual (6th Edition), 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 Eastbound and westbound left turn lanes are currently under construction and are anticipated to be in place by summer 2018. However, the intersection is anticipated to continue to operate at an unacceptable LOS without the installation of a traffic signal.

⁵ Although the intersection is not anticipated to warrant a traffic signal under Existing, EA, and EAP conditions, the addition of lane geometric improvements alone is not anticipated to improve the peak hour delays. As such, the intersection should be monitored and a traffic signal should be installed at the City Traffic Engineer's discretion.

⁶ A normalized AM PHF of 0.92 is used to determine peak hour operations outside of the 10-15 minute drop-off period.

⁷ Prohibit on-street parking to allow restriping for a 100 foot southbound right turn pocket.

(Urban Crossroads, 2018c, Table 6-5)



Table 4.16-40 Intersection Analysis for EAPC Conditions with Improvements

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Lake St. & Nichols Rd.																	
	EAPC (2020)																	
	- Without Improvements	TS	1	1	1	1	1	0	0	1	0	0	1	0	24.2	126.0	C	F
	- With Improvements	TS	1	<u>2</u>	1	1	<u>2</u>	0	<u>1</u>	1	0	<u>1</u>	1	0	25.6	30.0	C	C
	EAPC (2021)																	
	- Without Improvements	TS	1	1	1	1	1	0	0	1	0	0	1	0	31.7	180.5	C	F
	- With Improvements	TS	1	<u>2</u>	1	1	<u>2</u>	0	<u>1</u>	1	0	<u>1</u>	1	0	30.4	43.0	C	D
	EAPC (2024)																	
	- Without Improvements	TS	1	1	1	1	1	0	0	1	0	0	1	0	81.6	>200.0	F	F
	- With Improvements	TS	1	<u>2</u>	1	1	<u>2</u>	<u>1</u>	<u>1</u>	1	<u>1</u>	<u>1</u>	1	0	39.0	54.2	D	D
3	Alberhill Ranch Rd. & Nichols Rd.																	
	EAPC (2020)																	
	- Without Improvements	AWS	1	0	1	0	0	0	0	1	0	0	1	0	16.0	13.0	C	B
	- With Improvements		Not Applicable															
	EAPC (2021)																	
	- Without Improvements	AWS	1	0	1	0	0	0	0	1	0	0	1	0	21.2	16.7	C	C
	- With Improvements		Not Applicable															
	EAPC (2024)																	
	- Without Improvements	AWS	1	0	1	0	0	0	0	1	0	0	1	0	>100.0	83.0	F	F
	- With Improvements ⁴	<u>TS</u>	1	0	1	0	0	0	0	1	0	0	1	0	46.0	43.4	D	D
4	Lakeshore Dr. & Riverside Dr. (SR-74)																	
	EAPC (2020)																	
	- Without Improvements	TS	1	2	0	1	2	1	1	2	1	1	1	1	49.7	47.9	D	D
	- With Improvements		Not Applicable															
	EAPC (2021)																	
	- Without Improvements	TS	1	2	0	1	2	1	1	2	1	1	1	1	53.1	51.8	D	D
	- With Improvements		Not Applicable															
	EAPC (2024)																	
	- Without Improvements	TS	1	2	0	1	2	1	1	2	1	1	1	1	67.0	66.9	E	E
	- With Improvements ⁴	TS	1	2	0	1	2	1	1	2	1	1	<u>2</u>	0	49.6	49.1	D	D
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)																	
	EAPC (2020)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements ^{5,6}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.1	9.1	A	A
	EAPC (2021)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements ^{5,6}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.2	9.1	A	A
	EAPC (2024)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements ^{5,6}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.4	12.3	A	B
6	Collier Av. & Nichols Rd.																	
	EAPC (2020)																	
	- Without Improvements	CSS	1	0	1	0	0	0	0	1	0	1	1	0	29.7	74.7	D	F
	- With Improvements	<u>AWS</u>	1	0	1	0	0	0	0	1	0	1	1	0	31.7	23.4	D	C
	EAPC (2021)																	
	- Without Improvements	CSS	1	0	1	0	0	0	0	1	0	1	1	0	41.1	>100.0	E	F
	- With Improvements	<u>TS</u>	1	0	1	0	0	0	0	1	0	1	1	0	10.2	15.0	B	B
	EAPC (2024)																	
	- Without Improvements	CSS	1	0	1	0	0	0	0	1	0	1	1	0	>100.0	>100.0	F	F
	- With Improvements	<u>TS</u>	1	0	1	0	0	0	0	1	0	1	1	0	20.7	44.8	C	D



Table 4.16-40 Intersection Analysis for EAPC Conditions with Improvements (Cont'd)

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
7	Collier Av. & Riverside Dr. (SR-74)																	
	EAPC (2020)																	
	- Without Improvements	TS	1	1	0	1	1	1	0	1	1>	0	1	0	16.2	29.6	B	C
	- With Improvements					Not Applicable												
	EAPC (2021)																	
	- Without Improvements	TS	1	1	0	1	1	1	0	1	1>	0	1	0	17.4	34.1	B	C
	- With Improvements					Not Applicable												
	EAPC (2024)																	
	- Without Improvements	TS	1	1	0	1	1	1	0	1	1>	0	1	0	23.4	59.9	C	E
	- With Improvements	TS	2	1	0	1	1	1	0	1	1>	0	1	0	20.8	32.2	C	C
9	I-15 Southbound Ramps & Nichols Rd.																	
	EAPC (2020)																	
	- Without Improvements	AWS	0	0	0	0	1	0	0	1	1	1	1	0	21.4	20.4	C	C
	- With Improvements					Not Applicable												
	EAPC (2021)																	
	- Without Improvements	AWS	0	0	0	0	1	0	0	1	1	1	1	0	30.6	34.7	D	D
	- With Improvements					Not Applicable												
	EAPC (2024)																	
	- Without Improvements	AWS	0	0	0	0	1	0	0	1	1	1	1	0	>100.0	>100.0	F	F
	- With Improvements	TS	0	0	0	1	1	1	0	1	1	1	1	0	25.4	15.3	C	B
10	I-15 Northbound Ramps & Nichols Rd.																	
	EAPC (2020)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	0	15.9	24.3	B	C
	EAPC (2021)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements	TS	0	1	1	0	0	0	1	1	0	0	1	0	19.7	36.8	B	D
	EAPC (2024)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements	TS	0	1	1	0	0	0	2	2	0	0	2	0	19.4	42.0	B	D
17	El Toro Rd. & Tereticornis Av.																	
	EAPC (2020)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	10.4	F	B
	- With Improvements	AWS	0	1	0	0	1	0	0	0	0	0	1	0	50.1	9.5	F	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	22.4	--	C	--
	- With Improvements ⁷	AWS	0	1	0	0	1	0	0	0	0	0	1	0	15.0	--	B	--
	EAPC (2021)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	10.6	F	B
	- With Improvements	AWS	0	1	0	0	1	0	0	0	0	0	1	0	61.8	9.8	F	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	27.3	--	D	--
	- With Improvements ⁷	AWS	0	1	0	0	1	0	0	0	0	0	1	0	16.1	--	C	--
	EAPC (2024)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	11.2	F	B
	- With Improvements	AWS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	11.4	F	B
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	52.5	--	F	--
	- With Improvements ⁷	AWS	0	1	0	0	1	0	0	0	0	0	1	0	24.8	--	C	--



Table 4.16-40 Intersection Analysis for EAPC Conditions with Improvements (Cont'd)

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
18	El Toro Rd. & Carmela Ct.																	
	EAPC (2020)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	11.7	F	B
	- With Improvements ⁸	AWS	0	1	0	0	1	<u>1</u>	0	0	0	0	1	0	73.2	9.4	F	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{7,8}	AWS	0	1	0	0	1	<u>1</u>	0	0	0	0	1	0	22.2	--	C	--
	EAPC (2021)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	12.1	F	B
	- With Improvements ⁸	AWS	0	1	0	0	1	<u>1</u>	0	0	0	0	1	0	84.4	9.7	F	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{7,8}	AWS	0	1	0	0	1	<u>1</u>	0	0	0	0	1	0	24.5	--	C	--
	EAPC (2024)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	13.5	F	B
	- With Improvements ^{8,9,11}	TS	<u>1</u>	1	0	0	1	<u>1</u>	0	0	0	0	1	0	58.7	5.6	E	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{7,8,9,11}	TS	<u>1</u>	1	0	0	1	<u>1</u>	0	0	0	0	1	0	16.8	--	B	--
19	Dexter Av. & Central Av. (SR-74)																	
	EAPC (2020)																	
	- Without Improvements	TS	1	1	0	1	1	1>	1	3	1	1	4	1	44.5	59.8	D	E
	- With Improvements ¹⁰	TS	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	3	1	<u>0</u>	4	1	21.4	9.0	C	A
	EAPC (2021)																	
	- Without Improvements	TS	1	1	0	1	1	1>	1	3	1	1	4	1	49.8	70.1	D	E
	- With Improvements ¹⁰	TS	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	3	1	<u>0</u>	4	1	21.8	23.0	C	C
	EAPC (2024)																	
	- Without Improvements	TS	1	1	0	1	1	1>	1	3	1	1	4	1	76.7	118.7	E	F
	- With Improvements ¹⁰	TS	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	3	1	<u>0</u>	4	1	22.3	26.4	C	C
20	Cambern Av. & Central Av. (SR-74)																	
	EAPC (2020)																	
	- Without Improvements	TS	1	1	0	0	1	1	2	2	0	1	2	1	32.8	37.2	C	D
	- With Improvements		Not Applicable															
	EAPC (2021)																	
	- Without Improvements	TS	1	1	0	0	1	1	2	2	0	1	2	1	38.8	44.5	D	D
	- With Improvements		Not Applicable															
	EAPC (2024)																	
	- Without Improvements	TS	1	1	0	0	1	1	2	2	0	1	2	1	68.1	77.4	E	E
	- With Improvements	TS	1	1	0	<u>2</u>	1	1	2	<u>3</u>	0	1	<u>3</u>	1	40.6	49.1	D	D

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 1 = Improvement

² Per the Highway Capacity Manual (6th Edition), 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 Improvement consists of restriping the existing westbound right turn lane to a shared through-right lane.

⁵ Eastbound and westbound left turn lanes are currently under construction and are anticipated to be in place by summer 2018. However, the intersection is anticipated to continue to operate at an unacceptable LOS without the installation of a traffic signal.

⁶ Although the intersection is not anticipated to warrant a traffic signal under Existing and EAP conditions, the addition of lane geometric improvements alone is not anticipated to improve the peak hour delays. As such, the intersection should be monitored and a traffic signal should be installed at the City Traffic Engineer's discretion.

⁷ A normalized AM PHF of 0.92 is used to determine peak hour operations outside of the 10-15 minute drop-off period.

⁸ Prohibit on-street parking to allow restriping for a 100 foot southbound right turn pocket.

⁹ Prohibit on-street parking to allow restriping for a 100 foot northbound left turn pocket.

¹⁰ Improvements are consistent with the ultimate buildout design of the I-15/SR-74 interchange and will be completed with the construction of the new I-15/SR-74 interchange.

¹¹ The installation of a traffic signal may not be appropriate for the character of the surrounding residential neighborhood. As such, it is recommended that a traffic guard be utilized during the AM peak hour only to direct traffic similar to the way a signalized intersection would operate.

(Urban Crossroads, 2018c, Table 9-5)



As indicated in Table 4.16-40, although with implementation of Mitigation Measure MM 4.16-5 the intersection of El Toro Rd. at Tereticornis Av. (#17) would continue to operate at LOS F during the AM peak hour based on raw count data, when the normalized peak hour factor is considered this intersection would improve from LOS C to LOS B during the AM peak hour under Phase 1 conditions, and Project impacts at this intersection would be reduced to less-than-significant levels.

Traffic Signal Warrants – EAP 2020 and EAPC 2020

As shown in Table 4.16-40, installation of a traffic signal at the intersection of I-15 Northbound Ramps at Nichols Rd. (#10) in conjunction with the remaining improvements identified in Table 4.16-40 would improve the LOS at this intersection from LOS F during both peak hours to LOS B during the AM peak hour and LOS C during the PM peak hour under EAP (2020) and EAPC (2020). The installation of a traffic signal at this location is identified as an improvement under the City's TIF program; however, the timing of the required improvements cannot be assured. Therefore, Project impacts to this intersection due to signal warrants would be cumulatively-considerable and unavoidable in the near term until the required improvements are in place.

Although the intersection of El Toro Road at Carmela Court (#18) meets traffic signal warrants under EAP (2020) and EAPC (2020) conditions, implementation of Mitigation Measure MM 4.16-6, which requires a fair-share contribution to convert this intersection to an all-way stop (AWS) in conjunction with other improvements would improve the LOS at this intersection acceptable levels; thus, a traffic signal would not be warranted under EAP (2020) or EAPC (2020) conditions with implementation of the required improvements. However, because the Project would only contribute a fair share towards the cost of the identified improvements, it cannot be assured that the improvements would be in place at the time of occupancy of Phase 1 of the proposed Project; thus, Project impacts to this intersection due to signal warrants would be cumulatively-considerable and unavoidable under near-term conditions prior to implementation of the required improvements.

Off-Ramp Queuing – EAP 2020 and EAPC 2020

Impacts due to off-ramp queuing issues were determined to be less than significant under EAP (2020) and EAPC (2020) conditions.

Freeway Segments – EAP 2020 and EAPC 2020

The Project would result in cumulatively-considerable impacts to the following freeway segments during EAP (2020) and/or EAPC (2020) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – 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 City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segments would be significant and unavoidable under EAP (2020) and EAPC (2020) conditions.



Freeway Merge/Diverge Locations – EAP 2020 and EAPC 2020

The following freeway merge/diverge location was shown to operate at a deficient LOS under both EAP (2020) and EAPC (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – 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 City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge location would be significant and unavoidable under EAP (2020) and EAPC (2020) conditions.

□ Phase 2 Conditions (EAP 2021 and EAPC 2021)

Intersections – EAP 2021 and EAPC 2021

As shown in Table 4.16-41, *Intersection Analysis for EAP (2021) Conditions with Improvements*, and previously shown on Table 4.16-40, improvements identified as part of TIF would improve the LOS at the following intersections to acceptable levels under EAP (2021) and EAPC (2021) conditions. Although the Project Applicant would be required to contribute appropriate TIF fees, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 2 of the proposed Project; therefore, Project impacts to the following intersections would represent near-term cumulatively-considerable and unavoidable impacts of the proposed Project for Phase 2 conditions prior to implementation of the required improvements:

- I-15 Northbound Ramps at Nichols Rd. (#10)
- Dexter Av. at Central Av. (SR-74) (#19)

As shown in Table 4.16-40, implementation of the improvements listed in Mitigation Measures MM 4.16-7 through MM 4.16-10 would improve the LOS at the following intersections to acceptable levels under EAP (2021) and/or EAPC (2021) conditions. However, because the mitigation requires payment of a fair share towards the cost of the improvements, it cannot be assured that the required improvements would be in place at the time of Phase 2 occupancy; therefore, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable until the required improvements are in place:

- Lake St. at Nichols Rd. (#1)
- Gunnerson St./Strickland Av. at Riverside Drive (SR-74) (#5)
- Collier Av. at Nichols Rd. (#6)
- El Toro Rd. at Carmela Ct. (#18)

As indicated in Table 4.16-40, although with implementation of Mitigation Measure MM 4.16-5 the intersection of El Toro Rd. at Tereticornis Av. (#17) would continue to operate at LOS F during the AM peak



Table 4.16-41 Intersection Analysis for EAP (2021) Conditions with Improvements

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74) EA (2021) - Without Improvements - With Improvements ^{4,5} EAP (2021) - Without Improvements - With Improvements ^{4,5}	CSS <u>TS</u> CSS <u>TS</u>	0 0	1 1	1 1	0 0	1 1	1 1	0 0	1 1	0 0	0 1	1 1	0 0	>100.0 9.1	>100.0 9.1	F A	F A
6	Collier Av. & Nichols Rd. EA (2021) - Without Improvements - With Improvements EAP (2021) - Without Improvements - With Improvements	CSS CSS <u>AWS</u>	1 1	0 0	1 1	Not Applicable						1 1	1 1	0 0	22.4 24.3 18.0	34.0 37.3 16.5	C C C	D E C
10	I-15 Northbound Ramps & Nichols Rd. EA (2021) - Without Improvements - With Improvements EAP (2021) - Without Improvements - With Improvements	CSS <u>TS</u> CSS <u>TS</u>	0 0	1 1	0 <u>1</u>	0 0	0 0	0 0	1 1	1 1	0 0	0 0	1 1	0 0	>100.0 14.1	66.3 18.4	F B	F B
17	El Toro Rd. & Tereticornis Av. EA (2021) - Without Improvements - With Improvements - Without Improvements ⁶ - With Improvements ⁶ EAP (2021) - Without Improvements - With Improvements - Without Improvements ⁶ - With Improvements ⁶	CSS <u>AWS</u> CSS <u>AWS</u> CSS <u>AWS</u> CSS <u>AWS</u> CSS <u>AWS</u>	0 0 0 0	1 1 1 1	0 0 0 0	0 0 0 0	1 1 1 1	0 0 0 0	0 0 0 0	1 1 1 1	0 0 0 0	0 0 0 0	1 1 1 1	0 0 0 0	>100.0 53.4 25.8 15.4	10.4 9.5 -- --	F F D C	B A -- --
18	El Toro Rd. & Carmela Ct. EA (2021) - Without Improvements - With Improvements ⁷ - Without Improvements ⁶ - With Improvements ^{6,7} EAP (2021) - Without Improvements - With Improvements ⁷ - Without Improvements ⁶ - With Improvements ^{6,7}	CSS <u>AWS</u> CSS <u>AWS</u> CSS <u>AWS</u> CSS <u>AWS</u> CSS <u>AWS</u>	0 0 0 0	1 1 1 1	0 0 0 <u>1</u>	0 0 0 0	1 1 1 <u>1</u>	0 0 0 0	0 0 0 0	1 1 1 1	0 0 0 0	0 0 0 0	1 1 1 1	0 0 0 0	>100.0 77.5 100.0 23.2	11.7 9.4 -- --	F F F C	B A -- --

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 1 = Improvement

² Per the Highway Capacity Manual (6th Edition), 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 Eastbound and westbound left turn lanes are currently under construction and are anticipated to be in place by summer 2018. However, the intersection is anticipated to continue to operate at an unacceptable LOS without the installation of a traffic signal.

⁵ Although the intersection is not anticipated to warrant a traffic signal under Existing and EAP conditions, the addition of lane geometric improvements alone is not anticipated to improve the peak hour delays. As such, the intersection should be monitored and a traffic signal should be installed at the City Traffic Engineer's discretion.

⁶ A normalized AM PHF of 0.92 is used to determine peak hour operations outside of the 10-15 minute drop-off period.

⁷ Prohibit on-street parking to allow restriping for a 100 foot southbound right turn pocket.

(Urban Crossroads, 2018c, Table 7-5)



hour based on raw count data under Phase 2 conditions, when the normalized peak hour factor is considered this intersection would improve from LOS D to LOS C during the AM peak hour, and Project impacts at this intersection would be reduced to less-than-significant levels.

Traffic Signal Warrants – EAP 2021 and EAPC 2021

As shown in Table 4.16-41 and Table 4.16-40, installation of a traffic signal at the following locations would improve the LOS at these intersections to acceptable levels. The installation of traffic signals at these locations are planned improvements under the City's TIF program. The Project would be required to contribute TIF fees, and would contribute a fair share towards the cost of installation of the traffic signal at Collier Av. at Nichols Road; however, it cannot be assured that the traffic signals would be in place at the time of Phase 2 occupancy (2021). Therefore, near-term Project impacts to the following intersections would remain cumulatively-considerable and unavoidable until the required improvements are in place.

- Collier Av. at Nichols Rd. (#6)
- I-15 Northbound Ramps at Nichols Rd. (#10)

Although the intersection of El Toro Road at Carmela Court (#18) meets traffic signal warrants under EAP (2021) and EAPC (2021) conditions, implementation of Mitigation Measure MM 4.16-6, which requires in part the conversion of this intersection to an all-way stop in addition to other improvements, would improve the LOS at this intersection to acceptable levels; thus, a traffic signal would not be warranted under EAP (2021) or EAPC (2021) conditions with implementation of the required improvements. However, the mitigation requires payment of a fair share towards the cost of the required improvements; thus, it cannot be assured that the improvements would be in place at the time of occupancy of Phase 2 of the proposed Project. Accordingly, near-term Project impacts due to the need to signalize this intersection would be cumulatively considerable and unavoidable under EAP and EAPC 2021 conditions prior to implementation of the required improvements.

Off-Ramp Queuing – EAP 2021 and EAPC 2021

Impacts due to off-ramp queuing issues were determined to be less than significant under EAP (2021) and EAPC (2021) conditions.

Freeway Segments – EAP 2021 and EAPC 2021

The Project would result in cumulatively-considerable impacts to the following freeway segments during EAP (2021) and EAPC (2021) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – 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 City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segments would be significant and unavoidable under EAP (2021) and EAPC (2021) conditions.



Freeway Merge/Diverge Locations – EAP 2021 and EAPC 2021

The Project would result in cumulatively-considerable impacts at the following freeway merge/diverge locations under EAP (2021) and EAPC (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – 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 City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge location would be significant and unavoidable under EAP (2021) and EAPC (2021) conditions.

Phase 3 Conditions (EAP 2024 and EAPC 2024)

Intersections – EAP 2024 and EAPC 2024

As shown in Table 4.16-42, *Intersection Analysis for EAP (2024) Conditions with Improvements*, and previously shown on Table 4.16-40, implementation of Mitigation Measures MM 4.16-13 and MM 4.16-16 would improve the LOS at the following intersections to acceptable LOS under EAP (2024) and EAPC (2024) conditions. Thus, implementation of the required mitigation would reduce the Project's impacts to less-than-significant levels at the following locations:

- Lakeshore Dr. at Riverside Dr. (SR-74) (#4)
- I-15 Southbound Ramps at Nichols Rd. (#9)

As also shown in Table 4.16-42, and previously shown on Table 4.16-40, improvements identified as part of TIF and/or TUMF would improve the LOS at the following intersections to acceptable levels under EAP (2024) and EAPC (2024) conditions. Although the Project Applicant would be required to contribute appropriate TIF and TUMF fees, it cannot be assured that the required improvements would be in place prior to occupancy of Phase 3 (Project buildout); therefore, Project impacts to the following intersections would represent near-term cumulatively-considerable and unavoidable impacts of the proposed Project for Phase 3 (buildout) conditions prior to implementation of the required improvements:

- Collier Av. at Riverside Dr. (SR-74) (#7)
- I-15 Northbound Ramps at Nichols Rd. (#10)
- Dexter Av. at Central Av. (SR-74) (#19)
- Cambern Av. at Central Av. (SR-74) (#20)

As shown in Table 4.16-40, implementation of the improvements listed in Mitigation Measures MM 4.16-11 through MM 4.16-17 would improve the LOS at the following intersections to acceptable levels under EAP (2024) and/or EAPC (2024) conditions. However, the mitigation requires payment of a fair share towards the cost of the required improvements; thus, it cannot be assured that the improvements would be in place at the



Table 4.16-42 Intersection Analysis for EAP (2024) Conditions with Improvements

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
4	Lakeshore Dr. & Riverside Dr. (SR-74)																	
	EA (2024)																	
	- Without Improvements	TS	1	2	0	1	2	1	1	2	1	1	1	1	55.2	51.6	E	D
	- With Improvements	TS	1	2	0	1	2	1	1	2	1	1	<u>2</u>	0	44.7	41.8	D	D
	EAP (2024)																	
	- Without Improvements	TS	1	2	0	1	2	1	1	2	1	1	1	1	56.4	53.3	E	D
	- With Improvements ⁴	TS	1	2	0	1	2	1	1	2	1	1	<u>2</u>	0	46.0	43.4	D	D
5	Gunnerson St./Strickland Av. & Riverside Dr. (SR-74)																	
	EA (2024)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements ^{5,6}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.1	9.1	A	A
	EAP (2024)																	
	- Without Improvements	CSS	0	1	1	0	1	1	0	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements ^{5,6}	<u>TS</u>	0	1	1	0	1	1	<u>1</u>	1	0	<u>1</u>	1	0	9.3	9.5	A	A
6	Collier Av. & Nichols Rd.																	
	EA (2024)																	
	- Without Improvements	CSS	1	0	1	0	0	0	0	1	0	1	1	0	24.8	41.4	C	E
	- With Improvements	<u>TS</u>	1	0	1	0	0	0	0	1	0	1	1	0	9.9	12.1	A	B
	EAP (2024)																	
	- Without Improvements	CSS	1	0	1	0	0	0	0	1	0	1	1	0	47.2	94.2	E	F
	- With Improvements	<u>TS</u>	1	0	1	0	0	0	0	1	0	1	1	0	11.3	19.4	B	B
9	I-15 Southbound Ramps & Nichols Rd.																	
	EA (2024)																	
	- Without Improvements	AWS	0	0	0	0	1	0	0	1	1	1	1	0	19.1	16.0	C	C
	- With Improvements		Not Applicable															
	EAP (2024)																	
	- Without Improvements	AWS	0	0	0	0	1	0	0	1	1	1	1	0	68.4	37.2	F	E
	- With Improvements	<u>TS</u>	0	0	0	<u>1</u>	1	0	0	1	1	1	1	0	20.5	20.2	C	C
10	I-15 Northbound Ramps & Nichols Rd.																	
	EA (2024)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	52.6	F	F
	- With Improvements	<u>TS</u>	0	1	<u>1</u>	0	0	0	1	1	0	0	1	0	14.6	20.6	B	C
	EAP (2024)																	
	- Without Improvements	CSS	0	1	0	0	0	0	1	1	0	0	1	0	>100.0	>100.0	F	F
	- With Improvements	<u>TS</u>	0	1	<u>1</u>	0	0	0	1	1	0	0	1	0	36.5	42.7	D	D
17	El Toro Rd. & Tereticornis Av.																	
	EA (2024)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	10.6	F	B
	- With Improvements	<u>AWS</u>	0	1	0	0	1	0	0	0	0	0	1	0	73.7	9.8	F	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	1	0	0	1	0	29.5	--	D	--
	- With Improvements ⁷		Not Applicable															
	EAP (2024)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	11.1	F	B
	- With Improvements	<u>AWS</u>	0	1	0	0	1	0	0	0	0	0	1	0	121.3	11.3	F	B
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	51.2	--	F	--
	- With Improvements ⁷	<u>AWS</u>	0	1	0	0	1	0	0	0	0	0	1	0	24.5	--	C	--

Table 4.16-42 Intersection Analysis for EAP (2024) Conditions with Improvements (Cont'd)

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
18	El Toro Rd. & Carmela Ct.																	
	EA (2024)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	12.1	F	B
	- With Improvements ^{8,9,10}	<u>TS</u>	0	1	0	0	1	<u>1</u>	0	1	0	0	1	0	49.7	5.4	D	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	1	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{7,8,9,10}	<u>TS</u>	0	1	0	0	1	<u>1</u>	0	1	0	0	1	0	15.1	--	B	--
	EAP (2024)																	
	- Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	13.4	F	B
	- With Improvements ^{8,9,10}	<u>TS</u>	<u>1</u>	1	0	0	1	<u>1</u>	0	0	0	0	1	0	57.9	5.6	E	A
	- Without Improvements ⁷	CSS	0	1	0	0	1	0	0	0	0	0	1	0	>100.0	--	F	--
	- With Improvements ^{7,8,9,10}	<u>TS</u>	<u>1</u>	1	0	0	1	<u>1</u>	0	0	0	0	1	0	16.7	5.6	B	A

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 1 = Improvement

² Per the Highway Capacity Manual (6th Edition), 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 Improvement consists of restriping the existing westbound right turn lane to a shared through-right lane.

⁵ Eastbound and westbound left turn lanes are currently under construction and are anticipated to be in place by summer 2018. However, the intersection is anticipated to continue to operate at an unacceptable LOS without the installation of a traffic signal.

⁶ Although the intersection is not anticipated to warrant a traffic signal under Existing and EAP conditions, the addition of lane geometric improvements alone is not anticipated to improve the peak hour delays. As such, the intersection should be monitored and a traffic signal should be installed at the City Traffic Engineer's discretion.

⁷ A normalized AM PHF of 0.92 is used to determine peak hour operations outside of the 10-15 minute drop-off period.

⁸ Prohibit on-street parking to allow restriping for a 100 foot southbound right turn pocket.

⁹ Prohibit on-street parking to allow restriping for a 100 foot northbound left turn pocket.

¹⁰ The installation of a traffic signal may not be appropriate for the character of the surrounding residential neighborhood. As such, it is recommended that a traffic guard be utilized during the AM peak hour only to direct traffic similar to the way a signalized intersection would operate.

(Urban Crossroads, 2018c, Table 8-5)

time of occupancy of Phase 3 (buildout) of the proposed Project. Accordingly, near-term Project impacts to the following intersections would be cumulatively considerable and unavoidable under near-term conditions prior to implementation of the required improvements:

- Lake St. at Nichols Rd. (#1)
- Alberhill Ranch Rd. at Nichols Rd. (#3)
- Gunnerson St./Strickland Av. at Riverside Drive (SR-74) (#5)
- Collier Av. at Nichols Rd. (#6)
- El Toro Rd. at Carmela Ct. (#18)

As indicated in Table 4.16-42, although with implementation of Mitigation Measure MM 4.16-5 the intersection of El Toro Rd. at Tereticornis Av. (#17) would continue to operate at LOS F during the AM peak hour based on raw count data under Phase 2 conditions, when the normalized peak hour factor is considered this intersection would improve from LOS F to LOS C during the AM peak hour, and Project impacts at this intersection would be reduced to less-than-significant levels.



Traffic Signal Warrants – EAP 2024 and EAPC 2024

As shown in Table 4.16-42 and Table 4.16-40, installation of a traffic signal at the following location, as required by Mitigation Measure MM 4.16-16, in conjunction with other improvements identified for this intersection above would improve the LOS to acceptable levels. Thus, implementation of the required mitigation would reduce Project impacts to the following intersection to less-than-significant levels.

- I-15 Southbound Ramps at Nichols Rd. (#9)

As required by Mitigation Measure MM 4.16-12, the Project Applicant would be required to contribute a fair share towards the costs of installing a traffic signal at the intersection of Alberhill Ranch Road and Nichols Road (#3). As shown in Table 4.16-40, installation of a traffic signal at this location would improve the LOS from LOS F during both peak hours to LOS D during both peak hours. However, it cannot be assured that the required improvement will be in place by the time Phase 3 of the Project is built-out and occupied. Therefore, Project impacts to the intersection of Alberhill Ranch Road and Nichols Road (#3) would be cumulatively considerable and unavoidable in the near-term under EAPC (2024) conditions until the required improvement is in place.

As shown in Table 4.16-42 and Table 4.16-40, installation of traffic signals at the following locations in conjunction with other improvements identified for these intersections above would improve the LOS to acceptable levels. The installation of traffic signals at the following locations are programmed improvements under the City's TIF program, and the Project additionally would be required to contribute a fair share towards the cost of installing a traffic signal at the intersection of Collier Av. at Nichols Rd. (#6). However, because it cannot be assured that traffic signals would be installed at the following locations prior to Phase 3 (buildout) occupancy of the proposed Project, near-term Project impacts to the following intersections would be cumulatively-considerable and unavoidable:

- Collier Av. at Nichols Rd. (#6)
- I-15 Northbound Ramps at Nichols Rd. (#10)

As shown in Table 4.16-42 and Table 4.16-40, installation of a traffic signal at the following location in conjunction with other improvements identified for this intersection (refer to Mitigation Measure MM 4.16-17) would improve the LOS to acceptable levels. However, because the Project would only make a fair-share contribution towards the required improvements, it cannot be assured that the traffic signal would be installed prior to occupancy of Phase 3 (Project buildout). Therefore, near-term impacts to the following intersection would be cumulatively considerable and unavoidable due to the need for signalization under EAP (2024) and EAPC (2024) conditions:

- El Toro Road & Carmela Court (#18)

Off-Ramp Queuing – EAP 2024 and EAPC 2024

Under EAPC (2024) conditions, the following movements are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAPC (2024) traffic conditions:



- I-15 Freeway Southbound Off-ramp at Nichols Road (#1): Shared southbound left-through-right turn lane during the AM peak hour only
- I-15 Freeway Northbound Off-ramp at Nichols Road (#2): Shared northbound left-through-right turn lane during the AM peak hour only

The Project would directly impact the I-15 Freeway Northbound Off-ramp at Nichols Road (#2), while impacts at the I-15 Freeway Southbound Off-ramp at Nichols Road (#1) would be cumulatively considerable. At this time, Caltrans has no fee programs or other improvement programs in place to address the deficiencies caused by development projects in the City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's direct impact to the I-15 Freeway Northbound Off-ramp at Nichols Road (#2) under EAP (2024) and EAPC (2024) conditions and the Project's cumulatively-considerable impact to the I-15 Freeway Southbound Off-ramp at Nichols Road (#1) under EAPC (2024) conditions represent significant and unavoidable impacts of the proposed Project.

Freeway Segments – EAP 2024 and EAPC 2024

The Project would result in cumulatively-considerable impacts to the following freeway segments during EAP (2024) and EAPC (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – 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 City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway segments would be significant and unavoidable under EAP (2024) and EAPC (2024) conditions.

Freeway Merge/Diverge Locations – EAP 2024 and EAPC 2024

The Project would result in cumulatively-considerable impacts at the following freeway merge/diverge locations under EAP (2024) and/or EAPC (2024) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, On-Ramp at Nichols Road (#2) – 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 City of Lake Elsinore (or other neighboring jurisdictions) on the State Highway System (SHS) roadway segments. Therefore, the Project's cumulatively-considerable impact to the above-listed freeway merge/diverge locations would be significant and unavoidable under EAP (2024) and EAPC (2024) conditions.



Threshold b.: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. As indicated under the discussion and analysis of Threshold a., implementation of each phase of the proposed Project would result in impacts to CMP facilities, including CMP intersections, CMP traffic signal warrants, CMP off-ramp queuing locations, CMP freeway segments, and CMP freeway merge/diverge locations. A summary of the Project's significant and unavoidable impacts to CMP facilities is provided below and the Project's impacts were previously shown in Table 4.16-35 through Table 4.16-38.

□ EAP (2020) and EAPC (2020) Conditions

CMP Intersection Impacts – EAP (2020) and EAPC (2020) Conditions

The Project would result in cumulatively-considerable and unavoidable impacts to the following CMP intersections under EAP (2020) and/or EAPC (2020) conditions:

- Gunnerson St./Strickland Av. at Riverside Drive (SR-74) (#5)
- I-15 Northbound Ramps at Nichols Rd. (#10)
- Dexter Av. at Central Av. (SR-74) (#19)

CMP Traffic Signal Warrants Impacts – EAP (2020) and EAPC (2020) Conditions

The Project would result in a cumulatively-considerable and unavoidable impact due to the need to signalize the following CMP intersection under EAP (2020) and/or EAPC (2020) conditions:

- I-15 Northbound Ramps at Nichols Rd. (#10)

CMP Off-Ramp Queuing Impacts – EAP (2020) and EAPC (2020) Conditions

Impacts to off-ramp queuing locations were shown to be less than significant prior to mitigation under EAP (2020) and EAPC (2020) conditions.

CMP Freeway Segment Impacts – EAP (2020) and EAPC (2020) Conditions

The Project would result in cumulatively-considerable and unavoidable impacts to the following freeway segments under EAP (2020) and/or EAPC (2020) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

CMP Freeway Merge/Diverge Impacts – EAP (2020) and EAPC (2020) Conditions

The Project would result in a cumulatively-considerable and unavoidable impact to the following freeway merge/diverge location under EAP (2020) and/or EAPC (2020) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only



☐ **EAP (2021) and EAPC (2021) Conditions**

CMP Intersection Impacts – EAP (2021) and EAPC (2021) Conditions

The Project would result in cumulatively-considerable and unavoidable impacts to the following CMP intersections under EAP (2021) and/or EAPC (2021) conditions:

- Gunnerson St./Strickland Av. at Riverside Drive (SR-74) (#5)
- I-15 Northbound Ramps at Nichols Rd. (#10)
- Dexter Av. at Central Av. (SR-74) (#19)

CMP Traffic Signal Warrants Impacts – EAP (2021) and EAPC (2021) Conditions

The Project would result in a cumulatively-considerable and unavoidable impact due to the need to signalize the following CMP intersection under EAP (2021) and/or EAPC (2021) conditions:

- I-15 Northbound Ramps at Nichols Rd. (#10)

CMP Off-Ramp Queuing Impacts – EAP (2021) and EAPC (2021) Conditions

Impacts to off-ramp queuing locations were shown to be less than significant prior to mitigation under EAP (2021) and EAPC (2021) conditions.

CMP Freeway Segment Impacts – EAP (2021) and EAPC (2021) Conditions

The Project would result in cumulatively-considerable and unavoidable impacts to the following freeway segments under EAP (2021) and/or EAPC (2021) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

CMP Freeway Merge/Diverge Impacts – EAP (2021) and EAPC (2021) Conditions

The Project would result in a cumulatively-considerable and unavoidable impact to the following freeway merge/diverge location under EAP (2021) and/or EAPC (2021) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only

☐ **EAP (2024) and EAPC (2024) Conditions**

CMP Intersection Impacts – EAP (2024) and EAPC (2024) Conditions

The Project would result in direct and/or cumulatively-considerable and unavoidable impacts to the following CMP intersections under EAP (2024) and/or EAPC (2024) conditions:

- Gunnerson St./Strickland Av. at Riverside Drive (SR-74) (#5) (Cumulatively-Considerable Impact)
- Collier Av. at Riverside Dr. (SR-74) (#7) (Cumulatively-Considerable Impact)



- I-15 Northbound Ramps at Nichols Rd. (#10) (Cumulatively-Considerable Impact)
- Dexter Av. at Central Av. (SR-74) (#19) (Cumulatively-Considerable Impact)
- Cambern Av. at Central Av. (SR-74) (#20) (Cumulatively-Considerable Impact)

CMP Traffic Signal Warrants Impacts – EAP (2024) and EAPC (2024) Conditions

The Project would result in a cumulatively-considerable and unavoidable impact due to the need to signalize the following CMP intersection under EAP (2024) and/or EAPC (2024) conditions:

- I-15 Northbound Ramps at Nichols Rd. (#10)

CMP Off-Ramp Queuing Impacts – EAP (2024) and EAPC (2024) Conditions

The Project would result in direct and/or cumulatively-considerable and unavoidable impacts to the following CMP off-ramp queuing locations under EAP (2024) and/or EAPC (2024) conditions:

- I-15 Freeway Southbound Off-ramp at Nichols Road (#1): Shared southbound left-through-right turn lane during the AM peak hour only (Cumulatively-Considerable Impact)
- I-15 Freeway Northbound Off-ramp at Nichols Road (#2): Shared northbound left-through-right turn lane during the AM peak hour only (Direct Impact)

CMP Freeway Segment Impacts – EAP (2024) and EAPC (2024) Conditions

The Project would result in cumulatively-considerable and unavoidable impacts to the following freeway segments under EAP (2024) and/or EAPC (2024) conditions:

- I-15 Freeway Southbound, North of Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, South of Nichols Road (#2) – LOS E PM peak hour only

CMP Freeway Merge/Diverge Impacts – EAP (2024) and EAPC (2024) Conditions

The Project would result in a cumulatively-considerable and unavoidable impact to the following freeway merge/diverge location under EAP (2024) and/or EAPC (2024) conditions:

- I-15 Freeway Southbound, Off-Ramp at Nichols Road (#1) – LOS E PM peak hour only
- I-15 Freeway Southbound, On-Ramp at Nichols Road (#2) – LOS E PM peak hour only

Threshold d.: Less-than-Significant Impact with Mitigation: Implementation of Mitigation Measure MM 4.16-1 would require the Project Applicant to prepare a temporary traffic control plan that complies with the applicable requirements of the California Manual on Uniform Traffic Control Devices. Implementation of the traffic control plan would ensure that adverse effects to emergency access in the local area during the Project's construction phase are reduced to less-than-significant levels.



4.17 TRIBAL CULTURAL RESOURCES

This Subsection is based, in part, on a site-specific cultural resources assessment report titled “A Phase I and II Cultural Resources Assessment for the Nichols Ranch Specific Plan Project” (dated April 28, 2018). The report was prepared by Brian F. Smith and Associates (BFSA) and is included as *Technical Appendix H* to this EIR. All references used in this Subsection are included in EIR Section 7.0, *References*. Confidential information has been redacted from *Technical Appendix H* for purposes of public review. In addition, much of the written and oral communication between Native American tribes, the City of Lake Elsinore, and BFSA is considered confidential in respect to places that have traditional tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

4.17.1 EXISTING CONDITIONS

A. Prehistoric Setting

1. Prehistoric Period Setting

The Project site is located in the northeastern portion of the City of Lake Elsinore in western Riverside County. The Paleo Indian, Archaic Period Milling Stone Horizon, and the Late Prehistoric Shoshonean groups are the three general cultural periods represented in Riverside County, as summarized briefly below. The following discussion of the cultural history of Riverside County references the San Dieguito Complex, Encinitas Tradition, Milling Stone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex, since these culture sequences have been used to describe archaeological manifestations in the region. The Late Prehistoric component present in the Riverside County area was represented by the Cahuilla, Gabrielino, and Luiseño Indians. (BFSA, 2018, p. 2.0-5) Refer to Section 2.3 of the Project’s cultural resources assessment (*Technical Appendix H*) for a more detailed discussion about the prehistoric cultural periods in Riverside County.

- Late Pleistocene/Paleo Indian Period (11,500 to circa 9,000 Years Before Present [YBP]). The Paleo Indian Period is associated with the terminus of the late Pleistocene (12,000 to 10,000 YBP). The environment during the late Pleistocene was cool and moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands. However, by the terminus of the late Pleistocene, the climate became warmer, which caused the glaciers to melt; sea levels to rise; greater coastal erosion; large lakes to recede and evaporate; extinction of Pleistocene megafauna; and major vegetation changes. The coastal shoreline at 10,000 YBP, depending upon the particular area of the coast, was near the 30-meter isobath, or two to six kilometers further west than its present location. Paleo Indians were likely attracted to multiple habitat types, including mountains, marshlands, estuaries, and lakeshores. These people likely subsisted using a more generalized hunting, gathering, and collecting adaptation utilizing a variety of resources including birds, mollusks, and both large and small mammals. (BFSA, 2018, p. 2.0-6)
- Early and Middle Holocene/Archaic Period (circa 9,000 to 1,300 YBP). Between 9,000 and 8,000 YBP, a widespread complex was established in the southern California region, primarily along the



coast. This complex is locally known as the La Jolla Complex, which is regionally associated with the Encinitas Tradition and shares cultural components with the widespread Milling Stone Horizon. The coastal expression of this complex appeared in the southern California coastal areas and focused upon coastal resources and the development of deeply stratified shell middens that were primarily located around bays and lagoons. The older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of over 7,000 years in this region, beginning over 9,000 YBP. (BFSA, 2018, p. 2.0-6)

The Encinitas Tradition is best recognized for its pattern of large coastal sites characterized by shell middens, grinding tools that are closely associated with the marine resources of the area, cobble-based tools, and flexed human burials. While ground stone tools and scrapers are the most recognized tool types, coastal Encinitas Tradition sites also contain numerous utilized flakes, which may have been used to pry open shellfish. Artifact assemblages at coastal sites indicate a subsistence pattern focused upon shellfish collection and nearshore fishing. This suggests an incipient maritime adaptation with regional similarities to more northern sites of the same period. Other artifacts associated with Encinitas Tradition sites include stone bowls, doughnut stones, discoidals, stone balls, and stone, bone, and shell beads. (BFSA, 2018, p. 2.0-6)

The coastal lagoons in southern California supported large Milling Stone Horizon populations circa 6,000 YBP, as is shown by numerous radiocarbon dates from the many sites adjacent to the lagoons. The ensuing millennia were not stable environmentally, and by 3,000 YBP, many of the coastal sites in central San Diego County had been abandoned. The abandonment of the area is usually attributed to the sedimentation of coastal lagoons and the resulting deterioration of fish and mollusk habitat, a situation well-documented at Batiquitos Lagoon. Over a 2,000-year period at Batiquitos Lagoon, dominant mollusk species occurring in archaeological middens shift from deep-water mollusks (*Argopecten* sp.) to species tolerant of tidal flat conditions (*Chione* sp.), indicating water depth and temperature changes. This situation likely occurred for other small drainages (Buena Vista, Agua Hedionda, San Marcos, and Escondido creeks) along the central San Diego coast where low flow rates did not produce sufficient discharge to flush the lagoons they fed (Buena Vista, Agua Hedionda, Batiquitos, and San Elijo lagoons). Drainages along the northern and southern San Diego coastline were larger and flushed the coastal hydrological features they fed, keeping them open to the ocean and allowing for continued human exploitation. Peñasquitos Lagoon exhibits dates as late as 2,355 YBP and San Diego Bay showed continuous occupation until the close of the Milling Stone Horizon. Additionally, data from several drainages in Camp Pendleton indicate a continued occupation of shell midden sites until the close of the period, indicating that coastal sites were not entirely abandoned during this time. (BFSA, 2018, p. 2.0-7)

By 5,000 YBP, an inland expression of the La Jolla Complex is evident in the archaeological record, exhibiting influences from the Campbell Tradition from the north. These inland Milling Stone Horizon sites have been termed “Pauma Complex.” By definition, Pauma Complex sites share a predominance of grinding implements (manos and metates), lack mollusk remains, have greater tool variety (including atlatl dart points, quarry-based tools, and crescentics), and seem to express a more sedentary lifestyle with a subsistence economy based upon the use of a broad variety of terrestrial resources. Although originally viewed as a separate culture from the coastal La Jolla Complex, it appears that



these inland sites may be part of a subsistence and settlement system utilized by the coastal peoples. Evidence from the 4S Project in inland San Diego County suggests that these inland sites may represent seasonal components within an annual subsistence round by La Jolla Complex populations. Including both coastal and inland sites of this time period in discussions of the Encinitas Tradition, therefore, provides a more complete appraisal of the settlement and subsistence system exhibited by this cultural complex. (BFSA, 2018, p. 2.0-7)

- Late Holocene/Late Prehistoric/San Luis Rey Period (1300 YBP to 1790). Approximately 1,350 YBP, a Shoshonean-speaking group from the Great Basin region moved into Riverside County, marking the transition to the Late Prehistoric Period. This period is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, yet effective, technological innovations. Technological developments during this period included the introduction of the bow and arrow between A.D. 400 and 600 and the introduction of ceramics. Atlatl darts were replaced by smaller arrow darts, including Cottonwood series points. Other hallmarks of the Late Prehistoric Period include extensive trade networks as far-reaching as the Colorado River Basin and cremation of the dead. (BFSA, 2018, pp. 2.0-7 and 2.0-8)
- Late Holocene/Late Protohistoric Period (1790 to Present). Ethnohistoric and ethnographic evidence indicates that three Shoshonean-speaking groups occupied portions of Riverside County including the Cahuilla, the Gabrielino, and the Luiseño. The geographic boundaries between these groups in pre- and protohistoric times are difficult to place, but the Project is located on the border of ethnographic Luiseño and Cahuilla territory. Further ethnographic information for the Luiseño, Cahuilla, and Gabrielino groups is presented in section 2.3.4 of the Project's Cultural Resources Assessment (*Technical Appendix H*). (BFSA, 2018, p. 2.0-8)

B. Documented Prehistoric Resources

Brian F. Smith and Associates conducted an archaeological assessment of the Project site to identify the presence or absence of cultural resources. Testing to determine site significance included a records search, a Sacred Lands Records Search, a focused survey, and subsurface testing (advancing a series of shovel test pits [STPs]) (BFSA, 2018, pp. 1.0-1 and 1.0-2). The study resulted in the identification of one (1) prehistoric resource, which was previously unrecorded. During the 2017 survey of the property, BFSA confirmed the presence of prehistoric resource Site P-33-026830 at the Project site and conducted additional significance testing. The prehistoric resource site identified at the Project site is listed below.

- **Site P-33-026830:** Isolate P-33-026830 was identified on March 22, 2017 by BFSA archaeologists as two (2) prehistoric lithic flakes. Isolate P-33-026830 is located in the northeastern portion of the area of potential effect (APE). The area surrounding P-33-026830 has been disturbed by agricultural discing. Vegetation present during testing was minimal, which allowed for excellent surface visibility. Two (2) volcanic flakes were recovered from the surface of P-33-026830 although a shovel test conducted at the site was negative. P-33-026830 lacks intact subsurface deposit and the ability to provide any future research potential; therefore, P-33-026830 is evaluated as not significant under CEQA. (BFSA, 2018, p. 4.0-32 and 4.0-34)



4.17.2 APPLICABLE ENVIRONMENTAL REGULATIONS

The following is a brief description of the federal, state, and local environmental laws and related regulations governing the protection of cultural and tribal cultural resources.

A. Federal Regulations

1. National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) was passed primarily to acknowledge the importance of protecting our nation's heritage. While Congress recognized that national goals for historic preservation could best be achieved by supporting the drive, enthusiasm, and wishes of local citizens and communities, it understood that the Federal Government must set an example through enlightened policies and practices. In the words of the Act, the Federal Government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and "foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony." (NPS, 2018c)

NHPA and related legislation sought a partnership among the Federal Government and the States that would capitalize on the strengths of each. The Federal Government, led by the National Park Service (NPS) provides funding assistance; basic technical knowledge and tools; and a broad national perspective on America's heritage. The States, through State Historic Preservation Officers (SHPOs) appointed by the Governor of each State, would provide matching funds, a designated State office, and a statewide preservation program tailored to State and local needs and designed to support and promote State and local historic preservation interests and priorities. (NPS, 2018c)

An Advisory Council on Historic Preservation, the first and only Federal entity created solely to address historic preservation issues, was established as a cabinet-level body of Presidentially-appointed citizens, experts in the field, and Federal, State, and local government representatives, to ensure that private citizens, local communities, and other concerned parties would have a forum for influencing federal policy, programs, and decisions as they impacted historic properties and their attendant values. (NPS, 2018c)

Section 106 of NHPA granted legal status to historic preservation in federal planning, decision-making, and project execution. Section 106 requires all federal agencies to take into account the effects of their actions on historic properties and provide ACHP with a reasonable opportunity to comment on those actions and the manner in which Federal agencies are taking historic properties into account in their decisions. (NPS, 2018c)

A number of additional executive and legislative actions have been directed toward improving the ways in which all federal agencies manage historic properties and consider historic and cultural values in their planning and assistance. Executive Order 11593 (1971) and, later, Section 110 of NHPA (1980, amended 1992), provided the broadest of these mandates, giving federal agencies clear direction to identify and consider historic properties in federal and federally assisted actions. The National Historic Preservation Amendments of 1992 further clarified Section 110 and directed federal agencies to establish preservation programs commensurate with their missions and the effects of their authorized programs on historic properties.



2. *National Historic Landmarks Program*

National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, just over 2,500 historic places bear this national distinction. Working with citizens throughout the nation, the National Historic Landmarks Program draws upon the expertise of National Park Service staff who guide the nomination process for new Landmarks and provide assistance to existing Landmarks. (NPS, 2017a)

3. *American Indian Religious Freedom Act*

The American Indian Religious Freedom Act (AIRFA) requires each executive branch agency with statutory or administrative responsibility for the management of federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies also are required to maintain the confidentiality of sacred sites. Each executive branch agency with statutory or administrative responsibility for the management of federal lands are required to implement procedures to ensure reasonable notice is provided of proposed actions or land management policies that may restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites.

4. *Native American Graves Protection and Repatriation Act (NAGPRA)*

The Native American Graves Protection and Repatriation Act (NAGPRA; Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statute as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. (NPS, 2018a)

One major purpose of this statute is to require that federal agencies and museums receiving Federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items. The agencies and museums must consult with Indian Tribes and Native Hawaiian organizations to attempt to reach agreements on the repatriation or other disposition of these remains and objects. Once lineal descent or cultural affiliation has been established, and in some cases the right of possession also has been demonstrated, lineal descendants, affiliated Indian Tribes, or affiliated Native Hawaiian organizations normally make the final determination about the disposition of cultural items. Disposition may take many forms from reburial to long term curation, according to the wishes of the lineal descendent(s) or culturally affiliated Tribe(s). (NPS, 2018a)

The second major purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on Federal and tribal lands. NAGPRA requires that Indian tribes or Native Hawaiian organizations be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on Federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the



Archaeological Resources Protection Act. This NAGPRA requirement is likely to encourage the in-situ preservation of archaeological sites, or at least the portions of them that contain burials or other kinds of cultural items. (NPS, 2018a)

Other provisions of NAGPRA: (1) stipulate that illegal trafficking in human remains and cultural items may result in criminal penalties; (2) authorizes the Secretary of the Interior to administer a grants program to assist museums and Indian Tribes in complying with certain requirements of the statute; (3) requires the Secretary of the Interior to establish a Review Committee to provide advice and assistance in carrying out key provisions of the statute; (4) authorizes the Secretary of the Interior to penalize museums that fail to comply with the statute; and, (5) directs the Secretary to develop regulations in consultation with this Review Committee. (NPS, 2018a)

5. *Federal Antiquities Act*

The Antiquities Act is the first law to establish that archaeological sites on public lands are important public resources. It obligates federal agencies that manage the public lands to preserve for present and future generations the historic, scientific, commemorative, and cultural values of the archaeological and historic sites and structures on these lands. It also authorizes the President to protect landmarks, structures, and objects of historic or scientific interest by designating them as National Monuments. (NPS, 2018b)

B. State Regulations

1. *California Administrative Code, Title 14, Section 4308*

Section 4308, *Archaeological Features*, of Title 14 of the California Administrative Code provides that: “No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value.”

2. *California Code of Regulations Title 14, Section 1427*

California Code of Regulations Title 14, Section 1427 provides that: “No person shall collect or remove any object or thing of archaeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location or context in which the object or thing of archaeological or historical interest or value is found.”

3. *Traditional Tribal Cultural Places Act (Senate Bill 18, “SB 18”)*

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places (“cultural places”) through local land use planning. SB 18 also requires the Governor’s Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. (OPR, 2005)

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government. (OPR, 2005)



SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 *et seq.*) and specific plans (defined in Government Code § 65450 *et seq.*). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing state planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment. (OPR, 2005)

4. Assembly Bill 52 (AB 52)

The legislature added new requirements regarding tribal cultural resources in Assembly Bill 52 (AB 52). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2015)

The Public Resources Code now establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2015)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a notice of preparation for an environmental impact report or negative declaration or mitigated negative declaration filed on or after July 1, 2015. (OPR, 2015)

§ 21074 of the Public Resources Code defines “tribal cultural resources.” In brief, in order to be considered a “tribal cultural resource,” a resource must be either:

- (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
- (2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource. (OPR, 2015)



In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the state register of historic resources. In applying those criteria, a lead agency must consider the value of the resource to the tribe. (OPR, 2015)

5. State Health and Safety Code

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease “In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery...” until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. § 7051 specifies that the removal of human remains from “internment or a place of storage while awaiting internment” with the intent to sell them or to dissect them with “malice or wantonness” is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 establish the California Native American Graves Protection and Repatriation Act consistent with the federal law addressing the same. The Act stresses that “all California Indian human remains and cultural items are to be treated with dignity and respect.” It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims.

6. California Code of Regulations Section 15064.5

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archaeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 *et seq.*).
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:



- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - Is associated with the lives of persons important in our past;
 - Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - Has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

C. Local Regulations

1. **City of Lake Elsinore General Plan**

The City of Lake Elsinore General Plan, Chapter 4, *Resource Protection and Preservation*, addresses resource protection and preservation issues related to biological resources, open space, water resources, cultural and paleontological resources, and aesthetics resources. Section 4.6.8, *Cultural and Paleontological Resource Goals, Policies, and Implementation Programs*, and Section 4.7.3, *Historical Preservation Goals, Policies and Implementation Programs*, details policies, implementation programs, and responsible agencies and departments in support of the following goals regarding cultural resources:

- Goal 6: Preserve, protect, and promote the cultural heritage of the City and surrounding region for the education and enjoyment of all City residents and visitors, as well as for the advancement of historical and archaeological knowledge.
- Goal 7: Support state-of-the-art research designs and analytical approaches to archaeological and cultural resource investigations while also acknowledging the traditional knowledge and experience of the Native American tribes regarding Native American culture.
- Goal 9: Assure the recognition of the City's heritage through preservation of the City's significant historical sites and structures.
- Goal 10: Encourage the preservation, protection, and restoration of historical and cultural resources.

4.17.3 **BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact to tribal cultural resources if the Project or any Project-related component would:

- a. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined*



in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

- i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).*
- ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth 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, the lead agency shall consider the significance of the resource to a California Native American tribe.*

The above listed thresholds are derived directly from Section XVIII of Appendix G to the CEQA Guidelines and address typical adverse effects to tribal cultural resources (OPR, 2018).

4.17.4 **IMPACT ANALYSIS**

Threshold a: *Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*

- i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).*
- ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth 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, the lead agency shall consider the significance of the resource to a California Native American tribe.*

As part of the AB 52 and SB 18 consultation processes required by State law, on December 4, 2018, the City of Lake Elsinore sent a notice to the Native American Heritage Commission (NAHC) to obtain a list of Native American tribes with possible traditional or cultural affiliation to the area. The list of tribes was received by the City of Lake Elsinore on December 18, 2018. Based on the list of tribes provided by the NAHC, the City of Lake Elsinore sent a 90-day notification to potentially affected tribes on December 18, 2018. In response to the 90-day notification, only three tribes responded requesting consultation: the Rincon Band of Luiseño Indians, the Soboba Band of Luiseño Indians, and the Pechanga Band of Luiseño Indians. As a result, the following consultations occurred:

- **Rincon Band of Luiseño Indians:** The City of Lake Elsinore held a consultation meeting with the Rincon Band of Luiseño Indians on January 10, 2019. As part of the consultation, the Rincon Band of Luiseño Indians did not identify any potential Tribal Cultural Resources (TCRs) within the Project's potential impact limits. However, the Rincon Band of Luiseño Indians did indicate a concern over the potential for uncovering TCRs or other tribal-affiliated resources during construction of the Project.



In response, on January 10, 2019 City Planning staff provided the Rincon Band of Luiseño Indians with recommended mitigation measures for review to address the potential for subsurface TCRs on the Project site. The mitigation measures agreed to by the various tribes that were consulted is provided in EIR Subsection 4.8 as Mitigation Measures 4.8-1 through 4.8-7. The Rincon Band of Luiseño Indians indicated that they were in agreement with the identified mitigation measures, and the AB 52/SB18 consultation process was concluded on January 30, 2019.

- **Soboba Band of Luiseño Indians:** The City of Lake Elsinore held a consultation meeting with the Soboba Band of Luiseño Indians on January 15, 2019. As part of the consultation, the Rincon Band of Luiseño Indians did not identify any potential TCRs within the Project's potential impact limits. However, the Soboba Band of Luiseño Indians did indicate a concern over the potential for uncovering TCRs or other tribal-affiliated resources during construction of the Project. In response, on January 16, 2019 City Planning staff provided the Soboba Band of Luiseño Indians with recommended mitigation measures for review to address the potential for subsurface TCRs on the Project site. The mitigation measures agreed to by the various tribes that were consulted is provided in EIR Subsection 4.8 as Mitigation Measures 4.8-1 through 4.8-7. The Soboba Band of Luiseño Indians indicated that they were in agreement with the identified mitigation measures, and the AB 52/SB18 consultation process was concluded on February 6, 2019.
- **Pechanga Band of Luiseño Indians:** The City of Lake Elsinore held an initial consultation meeting with the Pechanga Band of Luiseño Indians on January 30, 2019. A follow-up consultation meeting was held on February 21, 2019. As part of the consultation, the Pechanga Band of Luiseño Indians did not identify any potential TCRs within the Project's potential impact limits. However, the Pechanga Band of Luiseño Indians did indicate a concern over the potential for uncovering TCRs or other tribal-affiliated resources during construction of the Project. In response, on February 25, 2019 City Planning staff provided the Soboba Band of Luiseño Indians with recommended mitigation measures for review to address the potential for subsurface TCRs on the Project site. The mitigation measures agreed to by the various tribes that were consulted is provided in EIR Subsection 4.8 as Mitigation Measures 4.8-1 through 4.8-7. The Soboba Band of Luiseño Indians indicated that they were in agreement with the identified mitigation measures, and the AB 52/SB18 consultation process was concluded on March 15, 2019.

As a result of the required AB 52 and SB 18 consultation processes with Native American tribes with possible traditional or cultural affiliation to the area and that requested consultation with the City, there were no TCRs identified within the Project's impact limits. Although the Project has the potential to result in impacts to TCRs that may be uncovered during grading and other site work as part of the Project, Mitigation Measures MM 4.8-1 through MM 4.8-7 have been agreed to by the culturally-affiliated tribes that requested consultation and would reduce the Project's potential to result in significant impacts to subsurface TCRs to less-than-significant levels. Notwithstanding, mitigation would be required to preclude impacts to subsurface TCRs. Therefore, prior to mitigation the Project has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and this represents a significant impact of the proposed Project.



4.17.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site that have a potential for uncovering TCRs as defined by Public Resources Code 21074.

As noted earlier in this Subsection, the City of Lake Elsinore conducted Native American consultation with potentially culturally affiliated tribes, as required by AB 52 and SB 18. As a result of this consultation effort, no TCRs were identified on site, although the tribes did indicate a concern over potential impacts to subsurface resources. Other cumulative developments within the region also would have the potential to result in impacts to subsurface TCRs. Therefore, the Project's potential impacts to subsurface TCRs represents a cumulatively-considerable impact for which mitigation would be required.

4.17.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Significant Direct and Cumulatively-Considerable Impact. Although no TCRs are known to occur within the Project's impact limits, implementation of the Project has the potential cause a substantial adverse change in the significance of tribal cultural resources that may be buried beneath the site's surface.

4.17.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- In the event that human remains are discovered, pursuant to California Health and Safety Code § 7050.5, as well as the Public Resources Code § 5097 *et. seq.*, the Project Archaeologist shall have the authority to divert or temporarily halt ground disturbance operation within 100 feet the area of discovery to allow for the evaluation of the human remains and the surrounding vicinity. If any human remains are discovered, the County Coroner and lead agency shall be contacted. The County Coroner shall determine that no investigation of the cause of death is required and determine if the remains are of Native American origin. In the event that the remains are determined to be of Native American origin, the NAHC shall be contacted within 24 hours of the discovery. The Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. If the NAHC is unable to identify a Most Likely Descendant, or if the Most Likely Descendant failed to make a recommendation within 48 hours after being notified by the NAHC, or the Project Applicant rejects the recommendation of the Most Likely Descendant; the Project Applicant shall rebury the Native American human remains and associated grave goods on the property in a location not subject to further ground disturbance. Evidence of compliance with this mitigation measure, if human remains are found, shall be provided to the City of Lake Elsinore upon the completion of a treatment plan and final report detailing the significance and treatment finding.



Mitigation

Mitigation Measures MM 4.8-1 through MM 4.8-7, provided in EIR Subsection 4.8, *Historic and Archaeological Resources*, shall apply. No additional mitigation is required.

4.17.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a.: Less-than-Significant Impact with Mitigation Incorporated. Implementation of Mitigation Measures MM 4.8-1 through MM 4.8-7 would ensure that grading and other ground-disturbing activities during construction are monitored by a qualified archaeologist as well as tribal monitors. The mitigation further requires the proper treatment of any resources that may be uncovered, and the avoidance of disturbance in areas where potential resources are uncovered. With implementation of the required mitigation, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and impacts would be reduced to less-than-significant levels.



4.18 UTILITIES AND SERVICE SYSTEMS

4.18.1 EXISTING CONDITIONS

The Project site is located within the service boundaries of the Elsinore Valley Municipal Water District (EVMWD) for water and sewer service, Southern California Edison Company for electricity, the Southern California Gas Company for natural gas, Verizon for telephone services, and Time Warner for cable television service. Solid waste hauling service to the Project site is provided by CR&R Waste Services under an exclusive franchise agreement with the City of Lake Elsinore. The analysis in this section is based in part upon the EVMWD Urban Water Management Plan (UWMP), dated June 2016, which is herein incorporated by reference and is available for public review at 31315 Chaney Street, Lake Elsinore, CA 92530 (EVMWD, 2016a). The information in this Subsection also relies upon the EVMWD 2016 Sewer System Master Plan Final Report, dated August 2016, and the EVMWD 2016 Water System Master Plan, also dated August 2016, both of which are also herein incorporated by reference and are available for public review at the EVMWD. Information in this Subsection also relies in part on a letter from the Riverside County Department of Waste Resources (RCDWR) dated June 13, 2018 and included in *Technical Appendix M*, which provides information about regional solid waste facilities (RCDWR, 2018). In addition, the analysis in this section is based in part on two technical reports prepared by Dexter Wilson Engineering, Inc. The first study is entitled, “Water System Analysis for Tract No. 37305,” dated July 2018 and included as *Technical Appendix N1*. The second study is entitled, “Preliminary Sewer System Evaluation for Tract No. 37305,” dated July 2018 and included as *Technical Appendix N2*.

A. Water Service and Supply

Water service to the Project area is provided by the EVMWD. The EVMWD’s service area encompasses approximately 97 square miles and includes the Cities of Lake Elsinore and Canyon Lake, and portions of the City of Wildomar, Murrieta, and unincorporated Riverside County and Orange County land. EVMWD’s service area is divided into two divisions: the Elsinore Division and the Temescal Division. The Project site is located within the Elsinore Division, which makes up the majority of the service area with approximately 42,700 accounts, encompassing an area of 96 square miles. (EVMWD, 2016a, p. 3-2)

The EVMWD has three primary sources of potable water supply: 1) local groundwater pumped from EVMWD-owned wells (which accounts for approximately 33 percent of the supply from 1992-2013 years); 2) surface water from Canyon Lake Reservoir and treated by the Canyon Lake Water Treatment Plant (which accounts for approximately 10 percent of the supply from 1992-2013); and 3) Imported water purchased from Metropolitan Water District (MWD) through Western Municipal Water District (WMWD) (which accounts for approximately 57 percent of the supply from 1992- 2013). In addition, EVMWD has access to several additional water sources through its acquisition of the Temescal Water Company assets in 1989. These consist of groundwater from the Bunker Hill, Rialto-Colton, Riverside North, Bedford, Coldwater, and Lee Lake Basins, and surface water from Temescal Creek and several tributary creeks. (EVMWD, 2016a, p. 6-1)

EVMWD has a recycled water network that delivers non-potable recycled water to customers in four different service areas. Three of the service areas are supplied by EVMWD-owned water reclamation facilities (WRF), and one recycled water service area is supplied from the Santa Rosa WRF owned by Rancho California Water District. The Eastern Municipal Water District (EMWD) supplies recycled water to the Canyon Lake Golf

Course in the Railroad Canyon service area during peak summer demands. All three of EVMWD's water reclamation facilities are capable of producing recycled water quality water. (EVMWD, 2016a, p. 6-1)

In conformance with the Water Conservation Act of 2009, EVMWD's UWMP identifies a Base Daily Water Use calculation, which is based on the average gross water use by a retail agency over a ten-year period ending no earlier than 2004 and no later than 2010, or a 15-year period if at least 10 percent of 2008 demand was met by recycled water. Because recycled water made up only 1.43% of 2008 deliveries, EVMWD's UWMP utilizes a ten-year period encompassing the years 1999 through 2008. In addition to the 10-year base period, the Department of Water Resources (DWR) also requires that an evaluation be performed over a 5-year continuous period, ending no earlier than December 31, 2007 and no later than December 31, 2010. Table 4.18-1, *EVMWD Baseline Period Ranges*, shows the baseline period ranges presented in the UWMP. (EVMWD, 2016a, p. 5-2)

Table 4.18-1 EVMWD Baseline Period Ranges

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	30,540	Acre Feet
	2008 total volume of delivered recycled water	438	Acre Feet
	2008 recycled water as a percent of total deliveries	1.43%	Percent
	Number of years in baseline period ¹	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range ²	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range ³	2007	
¹ If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.			
² The ending year must be between December 31, 2004 and December 31, 2010.			
³ The ending year must be between December 31, 2007 and December 31, 2010.			

(EVMWD, 2016a, Table 5-1)

EVMWD service area population for the baseline period is calculated using the DWR population tool, which requires the number of single-family and multi-family residential connections to estimate population. The number of service connections were available for 2000 and 2010, so service connections and population for 2001-2009 were interpolated between 2000 and 2010 census population. Annual and baseline period average gallons per capita per day is presented in Table 4.18-2, *EVMWD Gallons per Capita per Day*. As shown in Table 4.18-2, the population within EVMWD's service area increased from 82,288 to 123,206 between 1999 and 2008 (or an increase of 49.7%), while total water usage increased by 39.4% from 21,902 acre-feet to 30,540 acre-feet per year. For the five-year period between 2003 and 2007, the total population increased from 99,369 to 118,217 (or an increase of 19.0%), while water usage increased by 37.5% from 25,019 acre-feet to 34,395 acre-feet. As shown, gallons per capita per day (GPCD) decreased during the 10-year period from 238 GPCD to 221 GPCD, for an average of 236 GPCD. Over the five-year period, GPCD increased from 225 GPCD to 260 GPCD, with an average of 242 GPCD. (EVMWD, 2016a, p 5-4)



Table 4.18-2 EVMWD Gallons per Capita per Day

Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Annual Gross Water Use (AF) <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1999	82,288	21,902	238
Year 2	2000	86,431	23,313	241
Year 3	2001	90,592	22,379	221
Year 4	2002	94,902	24,656	232
Year 5	2003	99,369	25,019	225
Year 6	2004	103,937	27,232	234
Year 7	2005	108,610	28,870	237
Year 8	2006	113,336	32,423	255
Year 9	2007	118,217	34,395	260
Year 10	2008	123,206	30,540	221
10-15 Year Average Baseline GPCD				236
5 Year Baseline GPCD				
Year 1	2003	99,369	25,019	225
Year 2	2004	103,937	27,232	234
Year 3	2005	108,610	28,870	237
Year 4	2006	113,336	32,423	255
Year 5	2007	118,217	34,395	260
5 Year Average Baseline GPCD				242
2015 Compliance Year GPCD				
2015		149,322	21,333	128

(EVMWD, 2016a, Table 5-3)

In accordance with Water Code Section 10608.22, the 2020 urban water use target also must be less than the Minimum Water Use Reduction Requirement, which is calculated as 95 percent of the five-year base daily per capita water use. For EVMWD, this is 230 GPCD. Thus, the 2020 Water Use Target cannot exceed 230 GPCD. DWR published four methods to determine the urban water use target. The UWMP relies on Method 1, which requires a target water use of 80% of the 10-year base daily per capita water use. For the EVMWD, this results in a target of 189 GPCD. As also shown in Table 4.18-2, EVMWD's 2015 per capita daily water use of 128 GPCD is currently below the 2020 target of 189 GPCD. (EVMWD, 2016a, pp. 5-6 and 5-7)

Table 4.18-3, *EVMWD Total Projected Water Demands*, presents projected water usage within EVMWD's retail service area through year 2040. Table 4.18-4, *Single Dry Year Water Supply and Demand Comparison*, and Table 4.18-5, *Multiple Dry Years Supply and Demand Comparison*, presents the projected potable water system supplies up to year 2040 for urban water use within the EVMWD's service area during single-year and multiple-year dry conditions, respectively. As shown, the EVMWD forecasts being able to meet water demands from its wholesale and retail customers through year 2040. (EVMWD, 2016a, pp. 7-9 through 7-11)

Under existing conditions, the Project site generates a demand for non-potable water associated with dust suppression for the on-going mining reclamation activities within the northern portions of the site. For purposes of analysis herein, it is assumed that the Project site does not generate a demand for potable water under existing conditions.

Table 4.18-3 EVMWD Total Projected Water Demands

	2015	2020	2025	2030	2035	2040 (opt)
Potable and Raw Water (AF) <i>From Tables 4-1 and 4-2</i>	21,333	34,400	38,800	43,200	47,400	51,800
Recycled Water Demand (AF) <i>From Table 6-7 (DWR Table 6-4)</i>	1,236	1,805	1,805	1,805	1,805	1,805
TOTAL WATER DEMAND	22,569	36,205	40,605	45,005	49,205	53,605
NOTES: Recycled water demand only includes metered customer and golf course irrigation demands. It does not include required flow to Lake Elsinore and Temescal Wash or Groundwater IPR availability.						

(EVMWD, 2016a, Table 4-3)

Table 4.18-4 Single Dry Year Water Supply and Demand Comparison

	2020	2025	2030	2035	2040 (Opt)
Supply totals	41,170	49,514	50,089	58,079	58,309
Demand totals <i>(autofill from DWR Table 4-3 R)</i>	36,205	40,605	45,005	49,205	53,605
Difference	4,965	8,909	5,084	8,874	4,704
NOTES: Supply totals shown in DWR Table 6-9 are adjusted to reflect single dry year conditions. Demand totals are from DWR Table 4-3 R and include recycled water and potable water demands.					

(EVMWD, 2016a, Table 7-7)

Table 4.18-5 Multiple Dry Years Supply and Demand Comparison

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	42,782	51,126	51,701	59,691	59,921
	Demand totals	36,205	40,605	45,005	49,205	53,605
	Difference	6,577	10,521	6,696	10,486	6,316
Second year	Supply totals	42,640	50,984	51,559	59,549	59,779
	Demand totals	36,205	40,605	45,005	49,205	53,605
	Difference	6,435	10,379	6,554	10,344	6,174
Third year	Supply totals	41,640	49,984	50,559	58,549	58,779
	Demand totals	36,205	40,605	45,005	49,205	53,605
	Difference	5,435	9,379	5,554	9,344	5,174
NOTES: Supply totals shown in DWR Table 6-9 are adjusted to reflect multiple dry year conditions. Demand totals are from DWR Table 4-3 R and include recycled water and potable water demands.						

(EVMWD, 2016a, Table 7-8)



B. Sewer Service and Treatment

The EVMWD Sewer District provides service to the City of Lake Elsinore. The “backbone” of the system consists of trunk sewers, generally 10 inches in diameter and larger, that convey the collected wastewater to EVMWD’s Water Reclamation Facilities (WRFs). EVMWD’s existing wastewater collection systems consist of approximately 358 miles of sewer mains up to 54 inches in diameter, 33 lift stations, and three WRFs. EVMWD’s current service area is delineated into four separate collection systems. These are the Regional, Canyon Lake, Horsethief, and Southern collection systems. The flows conveyed in the Regional, Canyon Lake, and Horsethief collection systems are treated by EVMWD’s Regional, Railroad Canyon, and Horsethief WRFs, respectively. The EVMWD Wastewater Management Plan makes recommendations for improvements, such as gravity sewer mains, force mains, lift stations, and wastewater treatment facilities. (Lake Elsinore, 2011b, 3.16-1)

Under existing conditions, the Project site generates a nominal demand for wastewater treatment associated with on-going mining reclamation activities in the northern portions of the site. However, all wastewater generated on site is handled via portable toilets under existing conditions, which is regularly emptied by a rental service company. For purposes of analysis herein, it is assumed that the Project site does not generate a demand for wastewater treatment under existing conditions.

Wastewater flows within the Project area are conveyed to the Regional WRF, located approximately 1.2 miles south of the Project site. The Regional WRF treats the majority of flow generated in the service area, and primarily treats flows from the City of Lake Elsinore. The plant was constructed in 1986 with a capacity of 2 million gallons per day (mgd). Several expansions and improvements were completed over the years, and currently the plant has an average flow capacity of 8 mgd and a peak flow capacity of 17.6 mgd, and treats flows using an extended aeration process. (EVMWD, 2016b, p. 3-13)

C. Solid Waste Collection and Disposal

The RCDWR is responsible for the landfill disposal of non-hazardous waste within western Riverside County and operates six active landfills in addition to holding a contract agreement to dispose of waste at the private El Sobrante Landfill. Waste from the Project area is currently collected by CR&R, a franchise hauler, and delivered to the CR&R Perris Transfer Station/Material Recovery Facility (TS/MRF). Solid waste is then conveyed primarily to the El Sobrante landfill for disposal, although waste also may be delivered to the Badlands and Lamb Canyon Landfills. The following is a description of the landfills that serve the Project area under existing conditions:

- El Sobrante Landfill. 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 10910 Dawson Canyon Road. The landfill is owned and operated by USA Waste of California, a subsidiary of Waste Management, Inc., and encompasses 1,322 acres, of which 645 acres are permitted for landfill operation. The El Sobrante Landfill has a total disposal capacity of approximately 209.9 million cubic yards and can receive up to 70,000 tons per week (tpw) of refuse. USA Waste must allot at least 28,000 tpw for County refuse. The landfill's permit allows a maximum of 16,054 tons per day (tpd) of waste to be accepted into the landfill, due to the limits on vehicle trips. If needed, 5,000 tpd must be reserved for County waste,



leaving the maximum commitment of Non-County waste at 11,054 tpd. Per the 2017 Annual Report, the landfill had a remaining in-County disposal capacity of approximately 55.1 million tons.¹ In 2017, the El Sobrante Landfill accepted a daily average of 10,607 tons with a period total of approximately 3.2 million tons. The landfill is expected to reach capacity in approximately 2060. (RCDWR, 2018, pp. 1-2)

- **Badlands Landfill.** The Badlands Landfill is located northeast of the City of Moreno Valley at 31125 Ironwood Avenue and accessed from State Highway 60 at Theodore Avenue. The landfill is owned and operated by Riverside County. The existing landfill encompasses 1,168.3 acres, with a total permitted disturbance area of 278 acres, of which 150 acres are permitted for refuse disposal. The landfill is currently permitted to receive 4,500 tpd of Municipal Solid Waste (MSW) for disposal and has an estimated total capacity of approximately 20.5 million tons. As of January 1, 2018 (beginning of day), the landfill had a total remaining disposal capacity of approximately 6.9 million tons. The current landfill remaining disposal capacity is estimated to last, at a minimum, until approximately 2022. From January 2017 to December 2017, the Badlands Landfill accepted a daily average of 2,758 tons with a period total of approximately 846,769 tons. Landfill expansion potential exists at the Badlands Landfill site. (RCDWR, 2018, p. 2)
- **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), south of Interstate 10 and north of Highway 74. The landfill is owned and operated by Riverside County. 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 5,000 tpd of MSW for disposal and has an estimated total disposal capacity of approximately 20.7 million tons. As of January 1, 2018 (beginning of day), the landfill has a total remaining capacity of approximately 9.9 million tons. The current landfill remaining disposal capacity is estimated to last, at a minimum, until approximately 2029. From January 2017 to December 2017, the Lamb Canyon Landfill accepted a daily average of 1,878 tons with a period total of approximately 576,439 tons. Landfill expansion potential exists at the Lamb Canyon Landfill site.

4.18.2 **APPLICABLE ENVIRONMENTAL REGULATIONS**

The following is a brief description of the federal, state, and local environmental laws and related regulations related to utilities and service systems.

A. Federal Regulations

1. Applicable Water Supply Regulations

□ Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly

¹ 2017 El Sobrante Landfill Annual Report- Based on 137,936,464 tons remaining capacity (40% for in-county waste).



reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2018a)

☐ **Safe Drinking Water Act**

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids. (EPA, n.d.)

B. State Regulations

1. Applicable Water Supply Regulations

☐ **Water Conservation in Landscaping Act**

The Water Conservation in Landscaping Act was established to ensure adequate water supplies are available for future uses. To promote the conservation and efficient use of water, the Act requires local agencies to adopt a water efficient landscape ordinance. When such an ordinance had not been adopted, a finding as to why (based on the climatic, geologic, or topographical conditions) such an ordinance is not necessary, must be adopted. In the absence of such an ordinance or findings, the policies and requirements contained in the "model" ordinance drafted by the State of California shall apply within the affected jurisdiction.

☐ **Water Recycling in Landscaping Act**

In 2000, Senate Bill 2095 (Water Recycling in Landscaping Act) was approved by Governor Davis requiring any local public or private entity that produces recycled water and determines that within 10 years it will provide recycled water within the boundaries of a local agency, to notify the local agency of that fact. In turn, local agencies are required to adopt and enforce within 180 days a specified recycled water ordinance, unless the local agency adopted a recycled water ordinance or other regulation requiring the use of recycled water in its jurisdiction prior to January 1, 2001. (DWR, 2004)



☐ **Urban Water Management Planning Act**

The Urban Water Management Planning Act (UWMP Act) was proposed and adopted to ensure that water planning is conducted at the local level, as the State of California recognized that two water agencies in the same region could have very different impacts from a drought. The UWMP Act requires water agencies to develop Urban Water Management Plans (UWMPs) over a 20-year planning horizon, and further required UWMPs to be updated every five years. UWMPs are exempt from compliance with CEQA. (DWR, 2016, p. 1-2)

The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands. This part of the California Water Code (CWC) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;
- Efficient water uses;
- Demand management measures; and
- Water shortage contingency planning. (DWR, 2016, p. 1-3)

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009 and as a result of the governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7. This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020. (DWR, 2016, p. 1-2)

☐ **Government Code § 66473.7(b)(2) (Senate Bill 221)**

Under Senate Bill (SB) 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. SB 221 is intended as a 'fail safe' mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs before construction begins. SB 221 requires the legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove a tentative map, must include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply must be requested by the subdivision applicant or local agency, at the discretion of the local agency, and is based on written verification from the applicable public water system within 90 days of a request. SB 221 does not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households. (DWR, 2003)



☐ **California Senate Bill 610**

The California Water Code (Water Code) §§ 10910 through 10915 were amended by the enactment of SB 610 in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA. (DWR, 2003) For the purposes of SB 610, “project” means any of the following:

- (1) A proposed residential development of more than 500 dwelling units.
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- (4) A proposed hotel or motel, or both, having more than 500 rooms.
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
- (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project. (DWR, 2003)

The Project proposes 168 single-family homes, 14.5 acres of commercial uses, and 8.3 acres of parkland. As shown below in Table 4.18-7, *Estimated Project Water Generation*, the Project would result in a total demand of approximately 126,870 gpd of water. By contrast, development of the 72.5-acre Project site with 500 dwelling units would result in a demand for 181,250 gpd of water (72.5 ac x 2,500 gpd/ac = 181,250 gpd) (Dexter Wilson, 2018a, Table 2-1). Thus, the Project would result in a demand for water that is less than what would be required by a 500-dwelling unit project, and a water supply assessment was therefore not required for the proposed Project.

☐ **CA. Water Code § 10610 et seq. (Senate Bill 901)**

Signed into law on October 16, 1995, Senate Bill (SB) 901 required every urban water supplier to identify as part of its urban water management plan, the existing and planned sources of water available to the supplier over a prescribed 5-year period. The code requires the water service purveyor to assess the projected water demand associated with a proposed project under environmental review. Later provisions of SB 901 required compliance in the event that the proposed Project involved the adoption of a specific plan, amendment to, or revision of the land use element of a general plan or specific plan that would result in a net increase in the state population density. Upon completion of the water assessment, cities and counties may agree or disagree with the conclusions of the water service purveyors, but cannot approve projects in the face of documented water shortfalls without first making certain findings.



☐ **Executive Order B-29-15**

Executive Order (EO) B-29-15 ordered the State Water Resources Control Board (SWRCB) to impose restrictions to achieve a 25-percent reduction in potable urban water usage through February 28, 2016; directed the California Department of Water Resources (DWR) to lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes; and directed the California Energy Commission to implement a statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices. (DWR, 2018a)

☐ **Executive Order B-37-16**

Signed on May 9, 2016, EO B-37-16 established a new water use efficiency framework for California. The order bolstered the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans. (DWR, 2018a)

☐ **Executive Order B-40-17**

Signed on April 7, 2017, EO B-40-17 ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. It maintains water reporting requirements and prohibitions on wasteful practices. The order was built on actions taken in Executive Order B-37-16, which remains in effect. In a related action, state agencies, including the Department of Water Resources (DWR), released a plan to continue making water conservation a way of life. (DWR, 2018a)

☐ **Sustainable Groundwater Management Act (SGMA)**

The Sustainable Groundwater Management Act (SGMA) established a new structure for managing California's groundwater resources at a local level by local agencies. SGMA required, by July 1, 2017, the formation of locally-controlled groundwater sustainability agencies (GSAs) in the State's high- and medium-priority groundwater basins and subbasins (basins). A GSA is responsible for developing and implementing a groundwater sustainability plan (GSP) to meet the sustainability goal of the basin to ensure that it is operated within its sustainable yield, without causing undesirable results. The GSP Emergency Regulations for evaluating GSPs, the implementation of GSPs, and coordination agreements were adopted by DWR and approved by the California Water Commission on May 18, 2016. (DWR, 2018b)

2. *Applicable Solid Waste Regulations*

☐ **California Solid Waste Integrated Waste Management Act (AB 939, 1989)**

The Integrated Waste Management Act (IWMA) established an integrated waste management hierarchy to guide the California Integrated Waste Management Board (CIWMB) and local agencies in implementation, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal (it should be noted that the CIWMB no longer exists, and its duties have been assumed by CalRecycle). As part of the IWMA, the CIWMB was given a purpose to mandate the reduction of disposed waste. (CalRecycle, 1997a) The IWMA also required:



- the establishment of a task force to coordinate the development of city Source Reduction and Recycling Elements (SRREs) and a countywide siting element. (CalRecycle, 1997a)
- each city, by July 1, 1991, to prepare, adopt and submit a SRRE to the county which includes the following components: waste characterization; source reduction; recycling; composting; solid waste facility capacity; education and public information; funding; special waste (asbestos, sewage sludge, etc.); and household hazardous waste. (CalRecycle, 1997a)
- each county, by January 1, 1991, to prepare a SRRE for its unincorporated area, with the same components described above, and a countywide siting element, specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the jurisdiction which cannot be reduced or recycled for a 15-year period.
- each county to prepare, adopt, and submit to the Board an Integrated Waste Management Plan (IWMP), which includes all of the elements described above. (CalRecycle, 1997a)
- each city or county plan to include an implementation schedule which shows: diversion of 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995 through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000 through source reduction, recycling, and composting activities. (CalRecycle, 1997a)
- the CIWMB to review the implementation of each SRRE at least once every two years. (CalRecycle, 1997a)
- The IWMA required the CIWMB, in conjunction with an inspection conducted by a Lead Enforcement Agency (LEA), to conduct at least one inspection per year of each solid waste facility in the state. (CalRecycle, 1997a)

Additionally, the IWMA established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities. (CalRecycle, 1997a)

☐ **Waste Reuse and Recycling Act (AB 1327)**

The Waste Reuse and Recycling Act (WRRRA) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The WRRRA also required local agencies to adopt a local ordinance by September 1, 1993 or allow the model ordinance to take effect. The WRRRA requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided before building permits are issued. (CalRecycle, 1997b)

☐ **Mandatory Commercial Recycling Program (AB 341)**

Assembly Bill (AB) 341 (Chapter 476, Statutes of 2011 [Chesbro, AB 341]) directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB-341 was designed to help meet California's recycling goal of 75% by the year 2020. AB 341 requires all commercial businesses and public entities that generate 4 cubic yards



or more of waste per week to have a recycling program in place. In addition, multi-family apartments with five or more units are also required to form a recycling program. (CalRecycle, 2018)

☐ **Assembly Bill 1826 (AB 1826)**

Assembly Bill 1826 (AB 1826) requires businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (please note, however, that multifamily dwellings are not required to have a food waste diversion program). Organic waste (also referred to as organics throughout this resource) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

☐ **2016 California Green Building Standards Code (CAL Green; Part 11 of Title 24, California Code of Regulations)**

CALGreen became effective January 1, 2017, and is applicable to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California (including residential structures and elementary schools). § 5.408.3 of CALGreen requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on-site until the storage site is developed.

3. *Applicable Energy Conservation Regulations*

☐ **California Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CA. Code Regs. 6)**

The Building Energy Efficiency Standards were first adopted in 1976 and have been updated periodically since then as directed by statute. In 1975 the Department of Housing and Community Development adopted rudimentary energy conservation standards under their State Housing Law authority that were a precursor to the first generation of the Standards. However, the Warren-Alquist Act was passed one year earlier with explicit direction to the Energy Commission (formally titled the State Energy Resources Conservation and Development Commission) to adopt and implement the Standards. The Energy Commission's statute created separate authority and specific direction regarding what the Standards are to address, what criteria are to be met in developing the Standards, and what implementation tools, aids, and technical assistance are to be provided. (CEC, 2015)

The Standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. Public Resources Code Sections 25402 subdivisions (a)-(b) and 25402.1 emphasize the importance of building design and construction flexibility by requiring the Energy Commission to establish performance standards, in the form of an "energy budget" in terms of the energy consumption per square foot of floor space. For this reason,



the Standards include both a prescriptive option, allowing builders to comply by using methods known to be efficient, and a performance option, allowing builders complete freedom in their designs provided the building achieves the same overall efficiency as an equivalent building using the prescriptive option. Reference Appendices are adopted along with the Standards that contain data and other information that helps builders comply with the Standards. (CEC, 2015)

The 2016 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the nonresidential Standards include alignment with the ASHRAE 90.1 2013 national standards. New efficiency requirements for elevators and direct digital controls are included in the nonresidential Standards. The 2016 Standards also include changes made throughout all of its sections to improve the clarity, consistency, and readability of the regulatory language. (CEC, 2015)

Public Resources Code Section 25402.1 also requires the Energy Commission to support the performance standards with compliance tools for builders and building designers. The Alternative Calculation Method (ACM) Approval Manual adopted by regulation as an appendix of the Standards establishes requirements for input, output, and calculational uniformity in the computer programs used to demonstrate compliance with the Standards. From this, the Energy Commission develops and makes publicly available free, public domain building modeling software in order to enable compliance based on modeling of building efficiency and performance. The ACM Approval Manual also includes provisions for private firms seeking to develop compliance software for approval by the Energy Commission, which further encourages flexibility and innovation. (CEC, 2015)

☐ California Solar Rights and Solar Shade Control Acts

The Solar Rights Act sets parameters for establishing solar easements, prohibits ordinances and private covenants which restrict solar systems, and requires communities to consider passive solar and natural heating and cooling opportunities in new construction. This Act is applicable to all California cities and counties. California's solar access laws appear in the state's Civil, Government, Health and Safety, and Public Resources Codes. California Pub Res Code § 25980 sets forth the Solar Shade Control Act, which encourages the use of trees and other natural shading except in cases where the shading may interfere with the use of active and passive solar systems.

☐ Alternative Fuels Plan

On September 24, 2009, the California Air Resources Board (CARB) adopted amendments to the "Pavley" regulations that reduce greenhouse gas (GHG) emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments will also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017)



The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the U.S. EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions." (CARB, 2017)

The ARB's Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017)

The regulations had been threatened by automaker lawsuits and were stalled by the U.S. EPA's delay in reviewing and then initially denying California's waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. (CARB, 2017)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (CARB, 2017)

C. Local Regulations

1. Applicable Water Supply and Wastewater Regulations

□ Lake Elsinore Municipal Code (LEMC) – Title 16, Chapter 16.34, Chapter 16.52 and Chapter 16.52

Section 16.34.040 in Chapter 16.34 (Requirements for Building Permit Issuance) requires that prior to the issuance of a building permit, utilities such as water and sewer, when requiring extensions to serve any parcel to be developed, shall be constructed by the owner's licensed contractor and that parcels shall be deemed served by City water and sewer if the distance in feet from the closest property line to the facility to be extended shall be 200 times the number of lots to be developed.

Chapter 16.52 (Improvements – Water Facilities) requires that all required water storage and distribution facilities shall be installed by the land divider to serve each lot within the land division and shall be of such size and design to adequately satisfy the domestic and fire demands. All water facilities shall be installed in accordance with City standards.

Chapter 16.56 (Improvements – Sanitary Sewer Facilities) requires that all sewer facilities shall be installed in accordance with the City standards and that the sewer facilities shall be of such size and design to adequately serve each lot within the land division and all existing or future tributary areas. Where sanitary sewer service is not available, a private sewage disposal system for each lot as required by the ordinance establishing standards for private sewage disposal systems shall be constructed.



☐ Lake Elsinore Municipal Code (LEMC) – Title 19, Chapter 19.08

Chapter 19.08 (Water Efficient Landscaping Requirements) of the Lake Elsinore Municipal Code was adopted in order to implement the requirements necessary to meet the State of California Efficiency in Landscaping Act and the California Code of Regulations Title 23, Division 2, Chapter 2.7. The purpose and intent of this Chapter is also to:

- establish provisions for water management practices and water waste prevention;
- establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects;
- reduce the water demands from landscapes without a decline in landscape quality or quantity;
- retain flexibility and encourage creativity through appropriate design;
- assure the attainment of water efficient landscape goals by requiring that landscapes not exceed a maximum water demand of 70 percent of their reference evapotranspiration (ET_o) or any lower percentage as may be required by water purveyor policy or state legislation, whichever is stricter;
- eliminate water waste from overspray and/or runoff; and
- 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.

2. *Applicable Solid Waste Regulations*

☐ Lake Elsinore Municipal Code (LEMC) – Title 14, Chapter 14.12

The purpose and intent of Chapter 14.12 (Construction Waste and Demolition Waste Management) of the Lake Elsinore Municipal Code is to “reduce the amount of waste generated within the City of Lake Elsinore and ultimately disposed of in landfills, by requiring the project applicant for every project covered by the chapter to divert a minimum of 50 percent of the construction and demolition debris resulting from that project, in compliance with State and local statutory goals and policies, and to create a mechanism to secure compliance with the stated diversion requirements.” (Section 14.12.010) The diversion of a minimum 50 percent of construction and demolition debris will be imposed as a condition of approval on permits for each covered project. Covered projects include residential additions of 1,500 square feet or more of gross floor area, new detached and attached single-family residential dwellings, tenant improvements affecting 1,500 square feet or more of gross floor area, new commercial buildings, demolition of 1,000 or more square feet of gross floor area, operations that result in the export of earth, soil, rocks, gravel or other materials and all City public works and City public construction projects.

4.18.3 BASIS FOR DETERMINING SIGNIFICANCE

The proposed Project would result in a significant impact to utilities and service systems if the Project or any Project-related component would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects;*



- b. Have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years;*
- c. Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;*
- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or*
- e. Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.*

The above listed thresholds are derived directly from Section XIX of Appendix G to the CEQA Guidelines and address typical adverse effects associated with utilities and service systems (OPR, 2018).

4.18.4 IMPACT ANALYSIS

Threshold a. *Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?*

Threshold c. *Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

A. Water Treatment

Water service to the Project site would be provided via two points of connection to existing 16-inch water lines located within El Toro Road. The Project proposes a 20-inch water main within Nichols Road. A 12-inch water line would be constructed in "A" Street on-site to connect to the proposed 20-inch water main in Nichols Road. An additional 8-inch water line would be constructed in "B" Street on-site to connect to the existing 16-inch water main in El Toro Road. 8-inch water lines would be constructed in other local roadways on-site, creating a looped water system between the proposed 20-inch water line proposed in Nichols Road and the existing 16-inch line in El Toro Road. Environmental impacts associated with the construction of water infrastructure as necessary to connect to the EVMWD's existing water system are inherent to the Project's construction phase and have been evaluated throughout this EIR. Where construction-related impacts are identified, feasible mitigation measures have been identified to reduce impacts to the maximum feasible extent. There are no environmental impacts that would be unique to the installation of the proposed water infrastructure. Thus, although the Project would require the construction of new water conveyance facilities, impacts associated with the construction of water facilities would be less than significant with implementation of the mitigation measures identified throughout this EIR.



B. Wastewater Treatment

As discussed in EIR subsection 3.2.3.F, the Project proposes two alternatives to provide service to the Project site, as summarized below:

- Sewer Option #1: Sewer Option #1 proposes to convey flows from the portions of the site north of Stovepipe Creek towards a proposed sewer lift station within the proposed commercial site in Planning Area 7 via 8-inch sewer lines. Flows would then be conveyed via a 4-inch force main within “J” Street, “E” Street, and “H” Street to “B” Street, where flows would be conveyed south to a proposed 8-inch gravity sewer within “B” Street, located near the southern boundary of Planning Area 1. Flows would then be combined with flows from Planning Area 1 and conveyed through an off-site 8-inch sewer line proposed in El Toro Road towards an existing 8-inch sewer main that conveys flows to the south.
- Sewer Option #2: Under the second alternative, sewer flows from the portions of the site located north of Stovepipe Creek would be conveyed via proposed 8-inch sewer mains towards the southwest corner of the proposed commercial site in Planning Area 7. A new 12-inch sewer main would be constructed beneath I-15 using jack and bore construction and would connect to an existing 12-inch sewer main that increases and becomes a 30-inch sewer main in Collier Avenue. Sewer flows from the portion of the site located south of Stovepipe Creek would be conveyed via proposed an 8-inch sewer main towards the southeast corner of the Project site. Flows would then be conveyed through an off-site 8-inch sewer main proposed in El Toro Road towards an existing 8-inch sewer main that conveys flows to the south through existing 12-inch sewer main. Flows from both Project locations would combine with existing flows and would be conveyed to an existing sewer lift station located in the southern portions of the existing outlet mall. Flows then would travel via an existing 10-inch force main to an existing 18-inch sewer main located within Collier Avenue, near the intersection of Riverside Drive and Collier Avenue.

Environmental impacts associated with the construction of sewer infrastructure as necessary to connect to the EVMWD’s existing sewer system are inherent to the Project’s construction phase and have been evaluated throughout this EIR. Where construction-related impacts are identified, feasible mitigation measures have been identified to reduce impacts to the maximum feasible extent. There are no environmental impacts that would be unique to the installation of the proposed sewer infrastructure. Thus, although the Project would require the construction of new wastewater conveyance facilities, impacts associated with the construction of sewer facilities would be less than significant with implementation of the mitigation measures identified throughout this EIR.

Table 4.18-6, *Estimated Project Wastewater Generation*, provides a summary of the Project’s anticipated wastewater generation. As shown, the residential and commercial uses proposed by the Project would result in an average wastewater treatment demand of approximately 36,003 gpd.



Table 4.18-6 Estimated Project Wastewater Generation

Land Use	Acreage	Wastewater Duty Factor	Wastewater Demand
Single-Family Residential (4-6 du/ac)	31.1	780 gpd/ac	24,258 gpd
General Commercial	14.5	810 gpd/ac	11,745 gpd
Totals:	45.6	--	36,003 gpd

(Dexter Wilson, 2018b, Table 2-1)

Wastewater flows generated by the Project would be conveyed to the EVMWD Regional WRF, located approximately 1.2 mile south of the Project site. The Regional WRF has an average flow capacity of 8 mgd and a peak flow capacity of 17.6 mgd. The EVMWD reports that from 2012-2014, the maximum daily flows were estimated at up to 7.57 mgd. (EVMWD, 2016b, p. 4-18). As noted above, the Project would result in a demand for approximately 36,003 gpd of treatment capacity, or 0.04 mgd. When combined with the reported peak daily flow from 2012-2014 of 7.57 mgd, the total maximum flows with the Project would be approximately 7.61 mgd, which is below the average flow capacity of 8 mgd and far below the peak flow capacity of 17.6 mgd for the Regional WRF. As such, it can be concluded that there is adequate capacity at the Regional WRF to treat wastewater generated by the Project. Accordingly, the Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, nor would the Project result in a determination by the EVMWD that it has inadequate capacity to serve the project's projected demand in addition to its existing commitments; therefore, impacts to wastewater treatment facilities would be less than significant.

C. Stormwater Drainage Facilities

As discussed in Subsection 3.0, the Project proposes to construct two water quality/detention basins on site to capture flows and provide storm water attenuation and water quality treatment, with storm water drainage lines proposed throughout the Project site within areas proposed for residential and/or commercial development. Construction of the on-site drainage infrastructure is inherent to the Project's construction phase, and there are no impacts to the environment that would result from construction of on-site drainage infrastructure that has not already been evaluated and disclosed throughout this EIR. Where significant construction-related impacts are identified, feasible mitigation measures are identified to reduce impacts to the maximum feasible extent. Accordingly, impacts due to the construction of stormwater drainage facilities would be less than significant.

D. Electrical Power, Natural Gas, and Telecommunications

Construction of the proposed Project would require connections to existing electricity, natural gas, and telecommunication facilities. The Project area already is served by these utilities, and it is anticipated that proposed improvements to provide service to the Project site would occur within existing improved rights-of-way off-site, or on-site within areas already planned for impact and development by the Project. The proposed connections to these utilities are inherent to the Project's construction phase, which has been evaluated throughout this EIR. Where significant construction-related impacts are identified, feasible mitigation measures are identified to reduce impacts to the maximum feasible extent. There are no components of the Project's proposed utility connections that would result in significant environmental effects not already addressed by this EIR. Accordingly, impacts would be less than significant.



Threshold b. Would the Project be served by sufficient water supplies from existing entitlements and resources, or are new or expanded entitlements needed?

Table 4.18-7, *Estimated Project Water Generation*, provides a calculation of the Project’s anticipated water demand. As shown, the Project would generate a demand for approximately 126,870 gpd.

Table 4.18-7 Estimated Project Water Generation

Land Use	Acreage	Water Duty Factor	Water Demand
Single-Family Residential (4-6 du/ac)	31.1	2,300 gpd/ac	71,530 gpd
General Commercial	14.5	2,500 gpd/ac	36,250 gpd
Parks	8.3	2,300 gpd/ac	19,090 gpd
Totals:	45.6	--	126,870 gpd

Note: gpd = gallons per day; ac = acre.
(Dexter Wilson, 2018a, Table 2-1)

The UWMP bases its growth assumptions, in part, based on the land use designations of General Plans within the EVMWD’s service area. At the time the EVMWD published its 2015 Urban Water Management Plan in June 2016, the City of Lake Elsinore General Plan designated the northern 45.4 acres of the Project site for “Specific Plan” pursuant to the Alberhill Ranch Specific Plan, which in turn designates the northern 45.4 acres of the Project site for “Commercial – Specific Plan” land uses. The southern 27.1 acres of the Project site are designated by the General Plan for “General Commercial” land uses. Thus, the UWMP assumed buildout of the entire Project site with commercial land uses. Based on the water duty factors presented in Table 4.18-7, the UWMP assumed that development of the 72.5-acre Project site with commercial land uses would result in a demand for approximately 181,250 gpd (72.5 ac x 2,500 gpd/ac = 181,250 gpd). Thus, the UWMP assumed the Project site would result in a demand for 54,380 gpd more water than the demand that would be generated by the proposed Project.

As previously shown in Table 4.18-4 and Table 4.18-5, the EVMWD projects that it will have sufficient water supplies even during single and multiple dry years to meet the projected demand within its district through year 2040. Because the Project would result in less demand for potable water than is accounted for by the UWMP, it can be concluded that the EVMWD would have sufficient water supplies to serve the Project based on existing entitlements and resources. Additionally, the Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Therefore, impacts associated with the Project’s water demand would be less than significant.

Threshold d. Would the Project generate solid waste in excess of local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The proposed Project has the potential to exceed the daily or total solid waste capacity of County landfills during both construction and operation. Each is discussed below.



Solid Waste Impacts During Construction

Table 4.18-8, *Estimated Construction Solid Waste Generation*, provides an estimate of the amount of construction debris that would be generated by the Project during each phase of construction, based on residential and non-residential construction waste generation factors provided by the U.S. Environmental Protection Agency (EPA). Table 4.18-8 does not account for the construction of site improvements other than buildings. Proposed non-building features (e.g., roads, utilities, etc.) would produce nominal amounts of construction waste that would not substantially exceed the solid waste totals (by phase) listed in Table 4.18-8.

Table 4.18-8 Estimated Construction Solid Waste Generation

Phase	Land Use	Construction Rate ¹	Estimated Building Size	Solid Waste Generation Rate	Total	
					LBS/Day	Tons/Day
Phase 1	Residential	0.13 dwelling units/day	3,150 s.f. ²	4.39 lbs/s.f.	1,969	1.0
Phase 2	Residential	0.32 dwelling units/day	3,387 s.f. ²	4.39 lbs/s.f.	4,758	2.4
Phase 3	Commercial/Non-Residential	223 s.f./day	121,000 s.f. ³	4.34 lbs/s.f.	968	0.5

1. Based on information presented in EIR Subsection 3.3.8, *Construction Details*. Estimated duration of Phase 1 building construction (December 28, 2019 to December 11, 2020) would consist of 251 working days, Phase 2 (June 1, 2020 to December 31, 2021) would consist of a total of 415 working days, and Phase 3 (December 9, 2021 to January 5, 2024) would consist of a total of 542 working days.
2. Estimated average dwelling unit size based on size of lots and maximum lot coverage proposed within the Nichols Ranch Specific Plan. In order to provide “worst-case” estimates, the maximum lot coverage of 70% was used for 4,500 s.f. lots within Planning Areas 1, 2, and 3 (77 total dwelling units), and a maximum lot coverage of 70% for 5,000 s.f. lots within Planning Areas 4, 5, and 6 (91 total dwelling units). For Phase 2, the average dwelling unit size was calculated based on 43 units on 4,500 s.f. lots and 91 units on 5,000 s.f. lots.
3. Commercial square footage assumes 47,400 s.f. of hotel, 3,000 s.f. gas station retail, 5,500 s.f. of fast food, 9,400 s.f. of restaurant space, 4,400 s.f. of commercial retail, 8,000 s.f. health and fitness, and 43,000 s.f. of office uses.
4. Source: U.S. Environmental Protection Agency. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts*. Available online at: <https://www.epa.gov/smm/estimating-2003-building-related-construction-and-demolition-materials-amounts>. Accessed: August 15, 2018.

As presented in Table 4.18-8, the Project would generate approximately 1.0 tpd during Phase 1 building construction, 2.4 tpd during Phase 2 building construction, and 0.5 tpd during Phase 3 building construction. However, Phases 1 and 2 would overlap, as would Phases 2 and 3. The worst-case solid waste generation would occur when Phases 1 and 2 overlap, which would result in the generation of approximately 3.4 tpd of construction solid waste.

Solid waste generated during construction of the Project would be transported to the Perris Transfer Station/Material Recovery Facility (TS/MRF). The Project’s maximum daily waste generation of 3.4 tpd would represent approximately 0.11% of the daily disposal capacity of the TS/MRF (3,000 tpd) (CalRecycle, n.d.). Given the estimated volume of solid waste generated by the Project on a daily basis during Project construction, it is anticipated that the TS/MRF would have sufficient capacity to accept solid waste to be disposed of by the Project.



Solid waste conveyed to the Perris TS/MRF ultimately would be disposed of at the El Sobrante Landfill, Badlands Landfill, and/or Lamb Canyon Landfill. In 2017, the El Sobrante Landfill received an average of 10,607 tpd out of a maximum daily total of 16,054 tpd; thus, the average remaining daily capacity at the El Sobrante Landfill would be 5,447 tpd. The estimated worst-case 3.4 tpd that would be generated during construction of Phases 1 and 2 of the Project would represent only 0.06% of the remaining average daily disposal capacity at the El Sobrante Landfill. Likewise, the Badlands Landfill in 2017 received an average of 2,758 tpd of a total 4,500 tpd daily disposal capacity, leaving a remaining average daily disposal capacity of 1,742 tpd. The estimated worst-case 3.4 tpd that would be generated during construction of Phases 1 and 2 of the Project would represent only 0.20% of the remaining daily disposal capacity at the Badlands Landfill. Furthermore, the Lamb Canyon Landfill received a daily average of 1,878 tpd out of a daily disposal capacity of 5,000 tpd, leaving a remaining average daily disposal capacity of 3,122 tpd. The estimated worst-case 3.4 tpd that would be generated during construction of Phases 1 and 2 of the Project would represent only 0.11% of the remaining daily disposal capacity at the Lamb Canyon Landfill. (RCDWR, 2018)

Given the estimated solid waste quantity generated by the Project on a daily basis during construction, it is estimated that the Perris TS/MRF, El Sobrante Landfill, Lamb Canyon Landfill, and Badlands Landfill would have sufficient daily capacity to accept the construction waste generated by each phase of the proposed Project, including waste generated when construction activities associated with Phases 1 and 2 of the Project overlap. Furthermore, all applicants for proposed development within the City are required to submit a Waste Recycling Plan (WRP) pursuant to Lake Elsinore Municipal Code Chapter 14.12 (Construction and Demolition Waste Management). To verify AB 341 compliance for recycling of construction materials, the City requires accurate records for construction material recycling and solid waste disposal. According to City procedures, the Project Applicant would be required to post a security deposit to ensure implementation of the WRP. Mandatory compliance with the WRP requirements would further reduce Project impacts to solid waste by ensuring that 50% of the nonhazardous construction waste is recycled or reused.

Solid Waste Impacts During Operation

As shown in Table 4.18-9, *Project Solid Waste Generation*, buildout and occupancy of the Project is estimated to produce approximately 1.4 tpd of solid waste or approximately 511 tpy. Per the Riverside Countywide Integrated Waste Management Plan (CIWMP), which applies to the Project, up to 50 percent of its solid waste would need to be diverted from area landfills. In conformance with the CIWMP, the Project Applicant is required to work with future contract refuse haulers to implement recycling and waste reduction programs for solid wastes.

Solid waste generated by the Project would be transported to the Perris TTS/MRF. At full buildout, waste generated by the Project would represent approximately 0.05% of the daily disposal capacity of the TS/MRF (3,000 tpd) (CalRecycle, n.d.). Given the estimated volume of solid waste generated by the Project on a daily basis during the buildout condition, it is anticipated that the Perris TS/MRF would have sufficient capacity to accept solid waste to be disposed of by the Project. As noted above, the CIWMP would require that up to 50 percent of the solid waste be diverted from area landfills, which would further ensure the Project's solid waste generation does not exceed the capacity at the TS/MRF.



Table 4.18-9 Project Solid Waste Generation

Land Use	Units/Square Footage ¹	Solid Waste Generation Factor	Daily Solid Waste Generation (tpd)	Annual Solid Waste Generation (tpy)
Residential	168 du	12.23 lb/du/day	1.0	365
Commercial/Office	121,000 s.f.	6 lb/1,000 s.f./day	0.4	146
Totals:			1.4 tpd	511 tpy

1. Commercial square footage assumes 47,400 s.f. of hotel, 3,000 s.f. gas station retail, 5,500 s.f. of fast food, 9,400 s.f. of restaurant space, 4,400 s.f. of commercial retail, 8,000 s.f. health and fitness, and 43,000 s.f. of office uses.
2. du = dwelling unit; s.f. = square feet; tpd = tons per day; tpy = tons per year.
(Lake Elsinore, 2011b, Table 3.16-12)

Waste from the Perris TS/MRF would be ultimately disposed of at the El Sobrante Landfill, Lamb Canyon Landfill, and/or Badlands Landfill. As previously indicated, the El Sobrante Landfill has an average remaining daily capacity of 5,447 tpd, the Badlands Landfill has an average remaining daily capacity of 1,742 tpd, and the Lamb Canyon Landfill has an average remaining daily capacity of 3,122 tpd. The Project's 1.4 tpd would represent approximately 0.03% of the average remaining daily capacity at the El Sobrante Landfill, 0.08% of the average remaining daily capacity at the Badlands Landfill, and 0.04% of the average remaining daily capacity at the Lamb Canyon Landfill. Because the Project would generate a relatively small amount of solid waste per day as compared to the permitted capacities for these three landfills, it is anticipated that these landfill facilities would have sufficient daily capacity to accept solid waste generated by the Project.

Summary of Project Solid Waste Impacts

As indicated above, regional solid waste facilities would have adequate capacity to handle solid waste generated by the Project's construction and operational phases. Accordingly, impacts would be less than significant.

Threshold e. Would the Project fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Project would be required to comply with City and County waste reduction programs pursuant to the State's Integrated Waste Management Act and the Riverside County CIWMP (which applies to land uses within the City of Lake Elsinore). Project-generated solid waste would be conveyed to one of several landfills operated by the RCDWR or Waste Management of the Inland Empire (WMIE). These existing landfills are required to comply with federal, state, and local statutes and regulations related to solid waste. Compliance with federal, state, and local statutes and regulations would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn would aid in the extension of the life of affected disposal sites. The Project would comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant.



4.18.5 CUMULATIVE IMPACT ANALYSIS

This cumulative impact analysis considers development of the proposed Project in conjunction with other development projects and planned development in the vicinity of the Project site, including buildout of the City of Lake Elsinore General Plan Land Use Plan and the land use plans of surrounding jurisdictions. For the analysis of water and sewer service, the cumulative study area is the EVMWD service area. For the issue of solid waste and landfills, the cumulative study area comprises western Riverside County, as these areas all are served by the same landfills that would be served by the Project.

A. Wastewater Treatment and Capacity

Cumulatively-considerable impacts associated with the Project's proposed connections to existing wastewater facilities have been evaluated throughout this EIR, and feasible mitigation measures have been identified where necessary to reduce cumulatively-considerable impacts to the maximum feasible extent. There are no components of the Project's proposed sewer connections that would result in cumulatively-considerable impacts not already addressed by this EIR. Accordingly, cumulatively-considerable impacts associated with the Project's proposed sewer connections would be less than significant.

As previously indicated, the Project would generate approximately 36,003 gpd of wastewater requiring treatment. The Project, when considered in the context of other cumulative developments within the EVMWD service area, would incrementally contribute to a reduction in available capacity at the EVMWD Regional WRF. However, the EVMWD adopted a Sewer System Master Plan in 2016, which includes an analysis of future wastewater treatment demand within the EVMWD service area for each of five planning horizons (2020, 2025, 2030, 2035, and 2040). The Sewer System Master Plan identifies existing development, known development projects, and future development based on buildout of the various general plan land use plans within the EVMWD service area. The Sewer System Master Plan also includes a sewer system capacity evaluation, which identifies projected capacity deficiencies over the planning horizon years and determined that all projected deficiencies are addressed by improvements and projects presented in the EVMWD's proposed Capital Improvement Program (CIP). (EVMWD, 2016b)

At the time the Sewer System Master Plan was adopted, the Project site was designated for commercial development. Based on the wastewater duty factors presented in Table 4.18-6, the Sewer Master Plan would have assumed that development of the 72.5-acre Project site with commercial land uses would generate a demand for approximately 58,725 gpd of wastewater treatment capacity ($72.5 \text{ acres} \times 810 \text{ gpd/ac} = 58,725 \text{ gpd}$), or approximately 22,722 gpd more than the wastewater treatment capacity demands associated with the proposed Project (refer to Table 4.18-6). Therefore, because the EVMWD Sewer System Master Plan identifies a CIP program to accommodate growth within its service area through year 2040, and because the Project would generate less wastewater than was assumed in the Sewer System Master Plan for the site, the Project would result in a less-than-cumulatively considerable impact due to the need for construction or expansion of wastewater treatment facilities. Additionally, the Project would result in less-than-cumulatively considerable impacts due to a cumulative exceedance of the EVMWD's wastewater treatment capacity.



B. Water Supply and Treatment

Existing and projected development within EVMWD's service area would create a demand for additional water supplies. The EVMWD 2015 UWMP estimates that between 2015 and 2040, the population within the EVMWD service area would increase from 149,300 to 238,300 persons (EVMWD, 2016a, Table 3-2). Population projections driving future demand for water treatment services in the EVMWD service area were prepared based on EVMWD's proposed development projects and land uses within EVMWD's borders as well as current demographic information such as household size.

At the time the UWMP was adopted by EVMWD, the 72.5-acre Project site was designated for development with commercial retail land uses. Thus, the UWMP assumed buildout of the entire Project site with commercial land uses. Based on the water duty factors presented in Table 4.18-7, the UWMP assumed that development of the 72.5-acre Project site with commercial land uses would result in a demand for approximately 181,250 gpd ($72.5 \text{ ac} \times 2,500 \text{ gpd/ac} = 181,250 \text{ gpd}$). Thus, the UWMP assumed the Project site would result in a demand for 54,380 gpd more water than the demand that would be generated by the proposed Project.

The EVMWD UWMP demonstrates that the EVMWD would have adequate capacity to serve existing and planned developments through existing and already-planned resources through year 2040. Because the UWMP growth assumptions are based in part on the general plan land use designations within the service area, and because the Project would result in a substantial reduction in potable water demand as compared to the commercial retail land uses that were assumed for the Project site by the UWMP, the Project's projected water demands are more than accounted for by the UWMP. Therefore, the Project and other cumulative developments within the service area would be served by sufficient water supplies from existing entitlements, and the Project and other cumulative developments would not require or result in the construction of new water treatment facilities beyond what is already identified in the EVMWD CIP. Accordingly, the Project's impacts due to potable water demand would be less-than-cumulatively considerable.

C. Landfill Capacity

As previously discussed in the analysis of Threshold f, solid waste generated by construction and operation of the Project would represent nominal proportions of the daily disposal capacity at the Perris TS/MRF, El Sobrante Landfill, Badlands Landfill, and Lamb Canyon Landfill. The transfer station and landfills are currently projected to remain open as far into the future as 2060 (El Sobrante Landfill) and have sufficient daily capacity to handle solid waste generated by the Project and other cumulative developments during both construction and long-term operation (RCDWR, 2018). The proposed Project would not directly result in the need for expanded solid waste disposal facilities, as the Perris TS/MRF, El Sobrante Landfill, Badlands Landfill, and Lamb Canyon Landfill have sufficient existing capacity to handle solid waste generated by the proposed Project. Rather, the Project's incremental contribution to solid waste generation may contribute to an ultimate need for expanding the solid waste disposal facilities that would serve the Project and/or the construction of additional solid waste disposal facilities. Moreover, it is possible that as other developments in the region are proposed, the RCDWR and WMIE may opt to construct new solid waste disposal facilities to serve those developments, and such facilities may or may not receive solid waste generated by the proposed Project. Although the Project has the potential to cumulatively contribute to the demand for new/expanded solid waste disposal facilities, the construction of which could significantly impact the environment, it is too



speculative for evaluation in the absence of a proposed expansion or development plan (CEQA Guidelines § 15145). Therefore, the Project's cumulative impacts to solid waste disposal facilities would be less than significant.

D. Solid Waste Regulation Compliance

The proposed Project would adhere to regulations set forth by local and state regulations (including AB 341 and AB 939) during both construction and long-term operations. Other cumulative developments would also be required to comply with such regulations. As such, the Project as well as other cumulative developments in the area would not result in cumulative impacts with respect to compliance with federal, state, and local statutes and regulations related to solid wastes. Impacts would be less-than-cumulatively-considerable.

E. Electrical, Natural Gas, and Telecommunication Facilities

As previously indicated, construction of the proposed Project would require connections to existing electricity, natural gas, and telecommunication facilities. The Project area already is served by these utilities, and it is anticipated that proposed improvements to provide service to the Project site would occur within existing improved rights-of-way off-site, or on-site within areas already planned for impact and development by the Project. The proposed connections to these utilities are inherent to the Project's construction phase, which has been evaluated throughout this EIR. Where cumulatively-considerable impacts have been identified, feasible mitigation measures have been identified to reduce potential impacts to the maximum feasible extent. There are no components of the proposed Project's utility connections that would result in cumulatively-considerable effects not already evaluated by this EIR. Accordingly, impacts associated with the Project's proposed utility connections would be less-than-cumulatively considerable.

4.18.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Thresholds a and c: Less-than-Significant Impact. Although the Project would require the construction of new water conveyance facilities, impacts associated with the construction of water facilities would be less than significant with implementation of the mitigation measures identified throughout this EIR. Wastewater treatment services would be provided by the EVMWD, which has existing and projected capacity to serve existing and planned development within its service area, including the proposed Project. Thus, the Project would not result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Additionally, the Project would not result in a determination by the EVMWD that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitment. Additionally, the Project would construct two detention basins on site and associated drainage infrastructure, although there are no impacts to the environment that would result that are not already addressed throughout this EIR. Likewise, construction of the Project's electrical, natural gas, and telecommunications facilities are inherent to the Project's construction phase, and there are no impacts associated with these facilities that have not already been addressed by this EIR. Therefore, impacts would be less than significant.

Threshold b: Less-than-Significant Impact. The UWMP bases its growth assumptions, in part, based on the land use designations of General Plans within the EVMWD's service area, and the proposed Project would generate substantially less demand for potable water than development of the site with commercial uses, as



assumed in the UWMP. Because the EVMWD projects that it will have sufficient water supplies even during single and multiple dry years to meet the projected demand within its district through year 2040, and because the Project would result in less demand for potable water than is accounted for by the UWMP, it can be concluded that the EVMWD would have sufficient water supplies to serve the Project and other cumulative developments based on existing entitlements and resources. Additionally, the Project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Therefore, impacts associated with the Project's water demand would be less than significant.

Threshold d: Less-than-Significant Impact. During both construction and operation of the Project, the amount of solid waste generated by the Project would represent a nominal increase in the existing available disposal capacity of the Perris TS/MRF, the El Sobrante Landfill, the Badlands Landfill, and the Lamb Canyon Landfill. Thus, the Project would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and impacts would be less than significant.

Threshold e: Less-than-Significant Impact. Existing landfills that serve the Project site are required to comply with federal, state, and local statutes and regulations related to solid waste. Compliance with federal, state, and local statutes and regulations would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn would aid in the extension of the life of affected disposal sites. The Project would comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant.

4.18.7 CITY REGULATIONS, DESIGN REQUIREMENTS, AND MITIGATION

Applicable City Regulations and Design Requirements

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

- The Project shall comply with the provisions of Lake Elsinore Municipal Code Title 14, Chapter 14.12 (Construction and Demolition Waste Management), which requires the preparation and implementation of a Waste Recycling Program in order to verify Project-level compliance with the provisions of Assembly Bill 341.
- The Project shall comply with Lake Elsinore Municipal Code Title 16, Chapter 16.34, Section 16.34.040 (Requirements for Building Permit Issuance), which requires that prior to the issuance of a building permit, utilities such as water and sewer, when requiring extensions to serve any parcel to be developed, shall be constructed by the owner's licensed contractor and that parcels shall be deemed served by City water and sewer if the distance in feet from the closest property line to the facility to be extended shall be 200 times the number of lots to be developed.
- The Project shall comply with Lake Elsinore Municipal Code Title 16, Chapter 16.52 (Improvements – Water Facilities), which requires that all required water storage and distribution facilities shall be installed by the land divider to serve each lot within the land division and shall be of such size and



design to adequately satisfy the domestic and fire demands, and further requires that all water facilities shall be installed in accordance with City standards.

- The Project shall comply with Lake Elsinore Municipal Code Title 16, Chapter 16.52 (Improvements – Sanitary Sewer Facilities), which requires that all sewer facilities shall be installed in accordance with the City standards and that the sewer facilities shall be of such size and design to adequately serve each lot within the land division and all existing or future tributary areas.
- The Project shall comply with Lake Elsinore Municipal Code Title 19, Chapter 19.08 (Water Efficient Landscaping Requirements), which is intended to implement the requirements necessary to meet the State of California Efficiency in Landscaping Act and the California Code of Regulations Title 23, Division 2, Chapter 2.7. The purpose and intent of this Chapter is also to:
 - establish provisions for water management practices and water waste prevention;
 - establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects;
 - reduce the water demands from landscapes without a decline in landscape quality or quantity;
 - retain flexibility and encourage creativity through appropriate design;
 - assure the attainment of water efficient landscape goals by requiring that landscapes not exceed a maximum water demand of 70 percent of their reference evapotranspiration (ET_o) or any lower percentage as may be required by water purveyor policy or state legislation, whichever is stricter;
 - eliminate water waste from overspray and/or runoff; and
 - 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.
- The Project shall comply with the provisions of Assembly Bill 1826 (AB 1826), which requires businesses that generate 8 cubic yards or more of organic waste per week to arrange for organic waste recycling services. The threshold amount of organic waste generated requiring compliance by businesses is reduced in subsequent years. Businesses subject to AB 1826 shall take at least one of the following actions in order to divert organic waste from disposal:
 - Source separate organic material from all other recyclables and donate or self-haul to a permitted organic waste processing facility.
 - Enter into a contract or work agreement with gardening or landscaping service provider or refuse hauler to ensure the waste generated from those services meet the requirements of AB 1826.



Mitigation

Impacts to utilities and service systems would be less than significant; therefore, mitigation measures are not required.



5.0 OTHER CEQA CONSIDERATIONS

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

The CEQA Guidelines require that an EIR disclose the significant environmental effects of a project which cannot be avoided if the proposed project is implemented (CEQA Guidelines § 15126(b)). As described in detail in Section 4.0 of this EIR, the proposed Project is anticipated to result in the following impacts to the environment that cannot be reduced to below a level of significance after the implementation of relevant standard conditions of approval, compliance with applicable laws and regulations, and application of feasible mitigation measures. The significant environmental effects of the proposed Project that cannot be feasibly mitigated are as follows:

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Project construction- and operational-related air quality emissions would exceed the Regional Thresholds established by the SCAQMD for NO_x. No feasible mitigation measures exist to reduce the Project's emissions of NO_x to below the applicable SCAQMD Regional Thresholds of significance. During construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. Accordingly, the Project's significant direct and cumulatively-considerable impact due to a conflict with the SCAQMD 2016 AQMP would be significant and unavoidable. Additionally, Project construction and operation would result in unavoidable direct and cumulatively-considerable impacts due to projected violations of an applicable air quality standard (NO_x) and the Project's substantial contribution to an existing air quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project's construction and operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-attainment (i.e., ozone); this also represents a significant and unavoidable direct and cumulatively-considerable impact of the proposed Project.
- Biological Resources: Significant and Unavoidable Direct Impact. Although the mitigation identified in EIR Subsection 4.3.7 would reduce the Project's impacts to biological resources to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP Conservation Criteria would require the conservation of most or all of the 45.4-acre MSHCP-Excluded Project Area, which inherently conflicts with the Project's primary objective to develop the site with residential, commercial, and recreational land uses. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the site represents a significant impact of the proposed Project that cannot be mitigated to below a level of significance.
- Transportation and Traffic: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Implementation of the proposed Project would result in a number of direct and cumulatively-



considerable impacts to study area facilities. Unavoidable impacts would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; 2) although fair-share monetary contributions have been identified for the Project's cumulatively-considerable impacts, a funding program does not currently exist for the facility and it cannot be assured that required improvements would be in place prior to the facility experiencing a deficient LOS; and/or 3) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to transportation/traffic is presented in Table 4.16-34 through Table 4.16-38 in EIR Subsection 4.16, *Transportation and Traffic*.

- Transportation and Traffic: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Implementation of the proposed Project would result in a number of direct and cumulatively-considerable impacts to regional facilities identified in the 2011 Riverside County Congestion Management Plan (CMP). Unavoidable impacts to CMP facilities would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; and/or 2) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to transportation/traffic is presented in Table 4.16-34 through Table 4.16-38 in EIR Subsection 4.16, *Transportation and Traffic*.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL IMPACTS WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The CEQA Guidelines require EIRs to address any significant irreversible environmental changes that would be involved in the proposed action should it be implemented (CEQA Guidelines § 15126.2(c)). An environmental change would fall into this category if: a) the project would involve a large commitment of non-renewable resources; b) the primary and secondary impacts of the project would generally commit future generations to similar uses; c) the project involves uses in which irreversible damage could result from any potential environmental accidents; or d) the proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

Determining whether the proposed Project may result in significant irreversible environmental changes requires a determination of whether key non-renewable resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Natural resources in the form of construction materials and energy resources would be used in the construction of the proposed Project, but development of the Project site as proposed would have no measurable adverse effect on the availability of such resources, including resources that may be non-renewable (e.g., fossil fuels). Construction and operation of the proposed Project would not involve the use of large sums or sources of non-renewable energy. Additionally, the Project is required by law to comply with the California Building Standards Code (CALGreen), compliance with



which reduces a building operation's energy volume that is produced by fossil fuels. The Project would be subject to regulations to reduce the Project's reliance on non-renewable energy sources. The Project also would be subject to the Energy Independence and Security Act of 2007, which contains provisions designed to increase energy efficiency and availability of renewable energy. The Project also would be subject to California Energy Code, or Title 24, which contains measures to reduce natural gas and electrical demand, thus requiring less non-renewable energy resources. The Project would avoid the inefficient, wasteful, and unnecessary consumption of energy during Project construction, operation, maintenance, and/or removal. With mandatory compliance to the energy efficiency regulations and mitigation measures, the Project would not involve the use of large sums or sources of non-renewable energy.

EIR Subsection 4.7, *Hazards and Hazardous Materials*, provides an analysis of the proposed Project's potential to transport or handle hazardous materials which, if released into the environment, could result in irreversible damage to the environment. As concluded in the analysis, compliance with federal, state, and local regulation related to hazardous materials would be required of all contractors working on the property during the Project's construction and of all the businesses and residents that occupy the Project's buildings. As such, construction and long-term operation of the proposed Project would not have the potential to cause significant irreversible damage to the environment, including damage that may result from upset or accident conditions.

5.3 GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT

CEQA requires a discussion of the ways in which the proposed Project would be growth inducing. The CEQA Guidelines identify a project as growth inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment (CEQA Guidelines § 5126.2(d)). New employees and new residential developments represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and including additional economic activity in the area.

A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with an increase in population or employment and thus reducing or removing the barriers to growth. This typically occurs in suburban or rural environments where population or employment growth results in increased demand for service and commodity markets responding to the new population of residents or employees. Economic growth would likely take place as a result of the proposed Project's operation as a residential and commercial development. The Project's construction-related employees and operational-related residents and employees would purchase goods and services in the region, but any secondary increase in employment associated with meeting these goods and services needs would be marginal, accommodated by existing goods and service providers, and highly unlikely to result in any new physical impacts to the environment. In addition, the Project is a mixed-use project that collocates residential and commercial retail uses; thus, a portion of the Project's demand for commercial retail would be met on-site. Therefore, while the Project would create economic opportunities by introducing new residents to the Project site, this change would not induce substantial new growth in the region.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of significance to the environment. Typically, growth-inducing potential of a project would be considered significant if it fosters



growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies such as the Southern California Association of Governments (SCAG). Significant growth impacts also could occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The area surrounding the Project site is primarily characterized by vacant lands, mining uses, residential uses, school uses, and commercial land uses within the City of Lake Elsinore and unincorporated Riverside County. Development of the Project site with residential and commercial land uses would not directly induce surrounding properties to develop, because areas abutting the Project site to the east, west, and south are already developed with residential, school, and commercial uses, while areas directly north of the Project site are already planned for commercial uses. All remaining parcels surrounding the Project site are either developed, or planned for residential, commercial, or open space uses. Accordingly, the growth-inducing impacts of the Project would be less than significant. The Project is not expected to induce growth of land uses changes on the other parcels in the vicinity, as other lands surrounding the site are either already developed or planned to be developed consistent with their General Plan land use designations.

Furthermore, the proposed Project's improvements to the public infrastructure, including roads, drainage infrastructure, and other utility improvements are consistent with the City of Lake Elsinore's General Plan and would not indirectly induce substantial population growth in the local area. Upgraded water and sewer facilities proposed by the Project would be sized to serve future uses on-site, and would not indirectly induce growth in the surrounding area by removing obstacles to development because water and sewer facilities are already available in the area. As noted above, a majority of the Project's vicinity has been built out, thus the Project's proposed water and sewer improvements would not be growth inducing.

In summary, the proposed Project would have less-than-significant growth-inducing impacts.

5.4 EFFECTS FOUND NOT TO BE SIGNIFICANT DURING THE INITIAL STUDY PROCESS

CEQA Guidelines §15128 requires that an EIR:

"...contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."

An Initial Study was prepared for the proposed Project, which is included as *Technical Appendix A* to this EIR. Through the Initial Study process, the City of Lake Elsinore determined that the proposed Project could potentially cause adverse effects, thereby requiring preparation of an EIR. The Initial Study concluded that the Project would have no potential to cause significant effects to the following environmental issue areas: Agricultural/Forest Resources and Mineral Resources. Therefore, these issue areas are not required to be discussed in Section 4.0, *Environmental Analysis*, of this EIR. A brief summary of the two issues found not



to be significant is presented below, with a more detailed analysis provided in the Project's Initial Study contained in *Technical Appendix A*.

5.4.1 AGRICULTURE AND FOREST RESOURCES

Threshold a: Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

According to information available from the Farmland Mapping and Monitoring Program (FMMP), the majority of the Project site is designated as "Farmland of Local Importance" while a portion of the eastern portion of the Project site is designated as "Grazing Land." "Farmland of Local Importance" is land other than "Prime Farmland," "Farmland of Statewide Importance," or "Unique Farmland." This land may be important to the local economy due to its productivity or value. "Grazing Land" is land on which the existing vegetation is suited to the grazing of livestock. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) located on-site. (CDC, 2017) Therefore, the Project does not have the potential to directly or indirectly convert Farmland to non-agricultural use, and no impact would occur.

Threshold b: Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

According to the California Department of Conservation, there are no Williamson Act contracts in the Project vicinity (CDC, 2016). The nearest land under a Williamson Act contract is located approximately 6.5 miles northwest of the Project site. In addition, according to Riverside County Geographic Information System (GIS), there are no Agricultural Preserves in the Project vicinity (RCIT, 2018). The nearest Agricultural Preserve is located 6.9 miles northwest of the Project site. The Project site is zoned for "Commercial – Specific Plan" and "Commercial Mixed Use (CMU)," neither of which is an agricultural zoning designation. Additionally, no portion of the Project site is used for agricultural operations. Area to the south of the Project site are used for school uses, areas to the east are zoned for residential uses, areas to the north are zoned for "Specific Plan – Commercial" and open space, and to the west is I-15. Therefore, the proposed Project has no potential to conflict with existing zoning for agricultural use or with an existing Williamson Act contract.

Threshold c: Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

There are no lands within the Project vicinity that are designated as forest land, timberland, or Timberland Production (RCIT, 2018; Lake Elsinore, 2014). The Project site and surrounding areas are zoned for residential, commercial, and open space land uses. Accordingly, the proposed Project would not have the potential to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). As such, no impact would occur.



Threshold d: Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

Implementation of the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest uses, as there are no forest resources in the area. Under existing conditions, the Project site does not contain any forest lands and the northern 45.4 acres of the site are currently undergoing reclamation pursuant to Reclamation Plan 2006-01A2. Accordingly, the proposed Project would not have the potential to result in the loss of forest land or the conversion of forest land to non-forest use. As such, no impact would occur. (Google Earth, 2016)

Threshold e: Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

As noted in the foregoing analysis, there is not any “Farmland” on the Project site or in the Project site’s vicinity (CDC, 2017). There is no potential for the proposed Project to result in the conversion of Farmland to non-agricultural uses. Additionally, there are no forest lands in the Project vicinity, and conversion of forest land to non-forest use would not occur. As such, no impact would occur.

5.4.2 MINERAL RESOURCES

Threshold a: Would the Project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

According to the CDC, the Project site is located within Mineral Resource Zone (MRZ) 4. MRZ-4 represents “[a]reas of no known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources.” (CDC, 1991) In addition, the northern 45.4 acres of the Project site were formerly used for mining operations and are undergoing reclamation, and all known mineral resources of economic value have been extracted from the northern portions of the Project site. Accordingly, the Project would not result in the loss of any known mineral resource that would be of value to the region and the residents of the state, and impacts would be less than significant.

Threshold b: Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The City of Lake Elsinore General Plan and Alberhill District Plan apply an Extractive Overlay to a majority of the Project site, which “...provides for continued operations of extractive uses, such as aggregates, coal, clay mining, and certain ancillary uses” (Lake Elsinore, 2011a, Figure 2.1A and p. 2-18). The Alberhill District Plan acknowledges that “the Alberhill District [including the Project site] is at a crossroads and is poised to transition from a region with large quantities of extractive activities to a series of master planned communities” (Lake Elsinore, 2011a, p. AH-6). The northern 45.4 acres of the Project site were formerly used for mining operations and are undergoing reclamation. All known mineral resources of economic value have been extracted from the northern portions of the Project site. Accordingly, the Project would not result



in the loss of any locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan, and impacts would be less than significant.



6.0 ALTERNATIVES

CEQA Guidelines § 15126.6(a) describes the scope of analysis that is required when evaluating alternatives to proposed projects, as follows:

“An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.”

As discussed in Section 4.0, Environmental Analysis, the proposed Project would result in significant adverse environmental effects that cannot be mitigated to below levels of significance after the implementation of Project design features, mandatory regulatory requirements, and feasible mitigation measures. The unavoidable significant impacts are:

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. Project construction- and operational-related air quality emissions would exceed the Regional Thresholds established by the SCAQMD for NO_x. No feasible mitigation measures exist to reduce the Project’s emissions of NO_x to below the applicable SCAQMD Regional Thresholds of significance. During construction activities, the majority of construction-source NO_x emissions would be generated from soil import activities, while under operational conditions over 93 percent of operational-source NO_x emissions would be generated by Project-related traffic. Neither the Project Applicant nor the Lead Agency (City of Lake Elsinore) can substantively or materially affect reductions in mobile-source emissions beyond the regulatory requirements and mitigation measures identified herein. Accordingly, the Project’s significant direct and cumulatively-considerable impact due to a conflict with the SCAQMD 2016 AQMP would be significant and unavoidable. Additionally, Project construction and operation would result in unavoidable direct and cumulatively-considerable impacts due to projected violations of an applicable air quality standard (NO_x) and the Project’s substantial contribution to an existing air quality violation for ozone, as NO_x is an ozone precursor. Additionally, the Project’s construction and operational emissions would represent a cumulatively-considerable net increase of a criteria pollutant for which the Project region is non-attainment (i.e., ozone); this also represents a significant and unavoidable direct and cumulatively-considerable impact of the proposed Project.
- Biological Resources: Significant and Unavoidable Direct Impact. Although the mitigation identified in EIR Subsection 4.3.7 would reduce the Project’s impacts to biological resources to below a level of significance, the Project would nonetheless not comply with the MSHCP objectives for Cell Group W because strict compliance with the MSHCP Conservation Criteria would require the conservation of most or all of the 45.4-acre MSHCP-Excluded Project Area, which inherently conflicts with the



Project's primary objective to develop the site with residential, commercial, and recreational land uses. Accordingly, the Project's direct impact due to a non-compliance with the MSHCP conservation requirements for the site represents a significant impact of the proposed Project that cannot be mitigated to below a level of significance.

- Transportation and Traffic: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Implementation of the proposed Project would result in a number of direct and cumulatively-considerable impacts to study area facilities. Unavoidable impacts would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; 2) although fair-share monetary contributions have been identified for the Project's cumulatively-considerable impacts, a funding program does not currently exist for the facility and it cannot be assured that required improvements would be in place prior to the facility experiencing a deficient LOS; and/or 3) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to transportation/traffic is presented in Table 4.16-34 through Table 4.16-38 in EIR Subsection 4.16, *Transportation and Traffic*.
- Transportation and Traffic: Significant and Unavoidable Direct and Cumulatively-Considerable Impacts. Implementation of the proposed Project would result in a number of direct and cumulatively-considerable impacts to regional facilities identified in the 2011 Riverside County Congestion Management Plan (CMP). Unavoidable impacts to CMP facilities would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; and/or 2) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS. A summary of the Project's unavoidable impacts to transportation/traffic is presented in Table 4.16-34 through Table 4.16-38 in EIR Subsection 4.16, *Transportation and Traffic*.

6.1 ALTERNATIVES UNDER CONSIDERATION

CEQA Guidelines § 15126.6(e) requires that an alternative be include that describes what would reasonably be expected to occur on the property in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services (i.e., "no project" alternative). For development projects that include a revision to an existing land use plan, the "no project" alternative is considered to be the continuation of the existing land use plan into the future. For projects other than a land use plan (for example, a development project on an identifiable property), the "no project" alternative is considered to be a circumstance under which the project does not proceed (CEQA Guidelines § 15126.6(e)(3)(A-B)). For the alternatives analysis in this EIR, the potential scenario where the Project does not proceed is considered to be the "No Development Alternative," while the potential scenario where the



existing General Plan and specific plan land uses are implemented is considered to be the “No Project Alternative / General Plan Land Use Alternative (GPLUA).”

The following scenarios are identified by the City of Lake Elsinore as potential alternatives to implementation of the proposed Project.

6.1.1 NO PROJECT / NO DEVELOPMENT ALTERNATIVE (NDA)

The No Project/No Development Alternative (NDA) considers no new development/disturbance on the Project site following completion of site reclamation activities beyond that which occurs under existing conditions. As such, the 72.5-acre Project site would consist of undeveloped land that is routinely disced as part of on-going fire abatement activities. Under this Alternative, no improvements would be made to the Project site and none of the Project’s roadway, utility, and other infrastructure improvements would occur. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the Project site in its existing (i.e., post-reclamation) conditions, in conformance with CEQA Guidelines § 15126.6(e)(3)(B).

6.1.2 NO PROJECT / GENERAL PLAN LAND USE ALTERNATIVE (GPLUA)

The No Project/General Plan Land Use Alternative (GPLUA) considers development of the 72.5-acre Project site in accordance with the site’s existing land use designations. For the northern 45.4 acres of the Project site, development would occur in conformance with the Alberhill Ranch Specific Plan (ARSP), which allows for up to 380,000 s.f. of regional general commercial uses. The southern 27.1 acres of the Project site would be developed in conformance with the underlying General Plan land use designation of “General Commercial,” which allows for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. For purposes of analysis, it is assumed that the GPLUA would be developed to the maximum Floor Area Ratio (FAR) of 0.40 for the southern 27.1 acres of the site, which would allow for up to 472,190 s.f. of commercial area. Thus, this Alternative would allow for approximately 852,190 s.f. of general commercial building area, for an overall FAR of 0.27. Consistent with the NRSP, this Alternative proposes a bridge crossing over Stovepipe Creek slightly to the east of the location of the Project’s proposed crossing. Similar to the proposed Project, it is assumed that Stovepipe Creek would be preserved on site on 6.5 acres. Additionally, under this alternative there would be a connection to El Toro Road/Wood Mesa Court near the Project’s southeastern boundary.

6.1.3 REDUCED PROJECT ALTERNATIVE

The Reduced Project Alternative (RPA), as shown on Figure 6-1, *Reduced Project Alternative*, considers development of the Project site with similar uses as the proposed Project, but at a much lower intensity. Specifically, the RPA accommodates up to 104 “Low-Medium Residential” dwelling units on 38.4 acres at an overall density of 2.7 dwelling units per acre (du/ac); 7.2 acres of “General Commercial” land uses, which could accommodate up to 125,453 s.f. of general commercial land uses (at a maximum Floor Area Ratio [FAR] of 0.40); 8.3 acres of “Recreational (Park)” land uses; 1.3 acres of “Open Space” land uses; “Public Institutional (Drainage Basin)” land uses on 5.5 acres; “Floodway” (open space) land uses on 6.5 acres; and 5.3 acres of backbone circulation facilities. Except for the reduction in the number of dwelling units and areas proposed

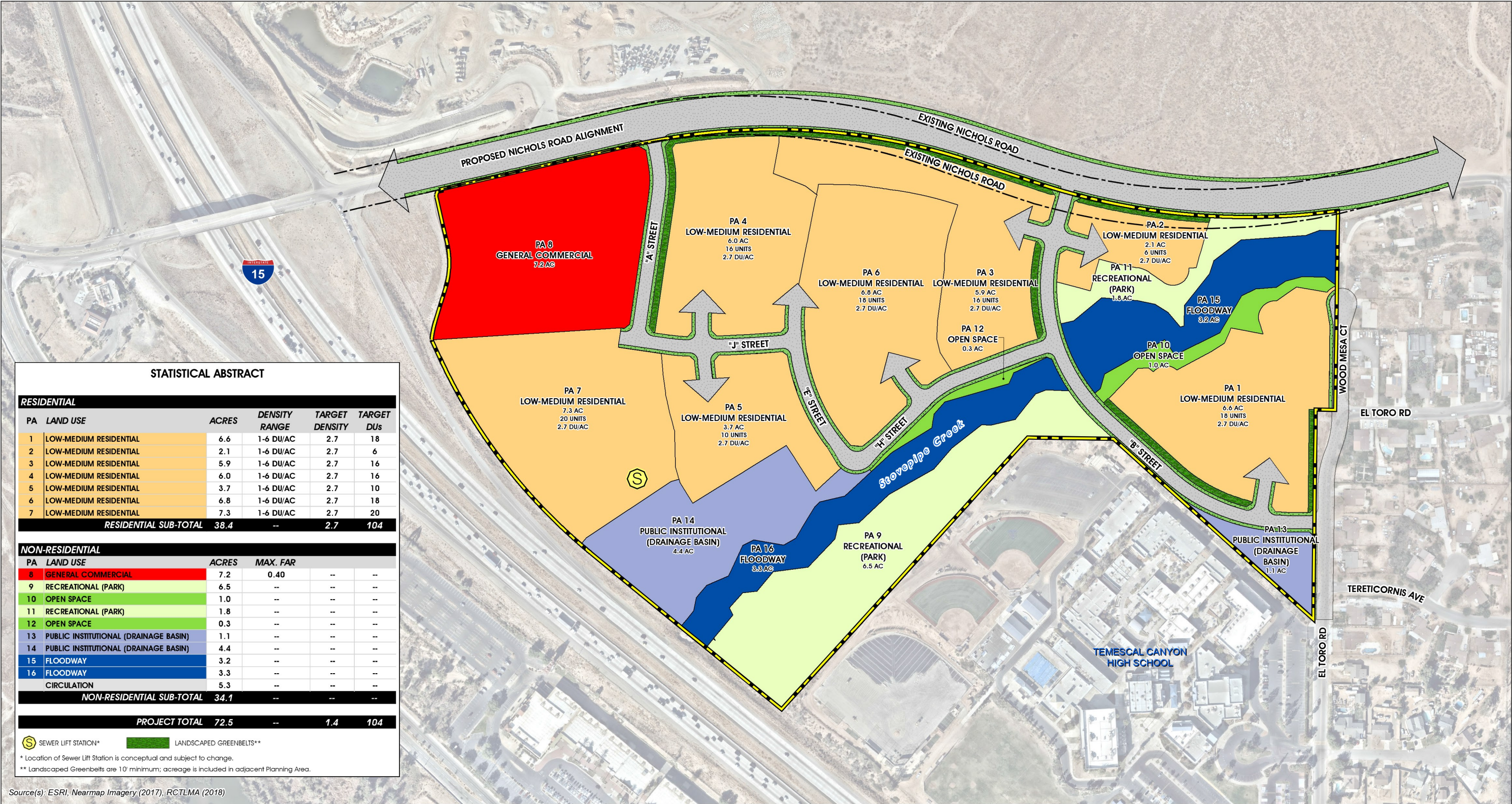
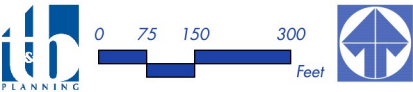


Figure 6-1



REDUCED PROJECT ALTERNATIVE



for commercial, all remaining components of the RPA would be the same as the proposed Project, including areas subject to grading and disturbance. This alternative was selected for evaluation by the Lead Agency to compare the environmental effects of the proposed Project against an alternative that would reduce the Project's significant and unavoidable impacts to air quality and traffic by reducing the total number of dwelling units and commercial square footage on the Project site.

6.2 ALTERNATIVES CONSIDERED AND REJECTED

An EIR is required to identify any alternatives that were considered by the Lead Agency but were rejected as infeasible. Among the factors described by CEQA Guidelines § 15126.6 in determining whether to exclude alternatives from detailed consideration in the EIR are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to the proposed Project, CEQA Guidelines § 15126.6(f)(1) notes:

“Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries...and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site...”

In determining an appropriate range of alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and, for a variety of reasons, rejected. Alternatives were rejected because either: 1) they could not accomplish the basic objectives of the Project, 2) they would not have resulted in a reduction of significant adverse environmental impacts, and/or 3) they were considered infeasible to construct or operate. A summary of the alternatives that were considered but rejected are described below.

6.2.1 ALTERNATIVE SITES

CEQA does not require that an analysis of alternative sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternative site then this alternative should be considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the “key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR” (CEQA Guidelines § 15126.6(f) (2)).

Based on a review of aerial photography, the City of Lake Elsinore General Plan land use map and a list of approved/pending development proposals within City of Lake Elsinore and nearby portions of unincorporated Riverside County that are included in the Project's Traffic Impact Analysis (EIR Technical Appendix L; refer to EIR Table 4.0-1 for a list of cumulative developments), there are no other available, undeveloped properties of similar size (i.e., approximately 72.5 acres) that are zoned for and adjacent to other properties designated for urban development and that would reduce or avoid the Project's significant and unavoidable impacts. For example, development of the Project at an alternative site location would not reduce or avoid the Project's significant and unavoidable air quality impacts due to NO_x emissions during both construction and operation, as it would not be possible to develop 168 single family residential homes and 14.5 acres of commercial uses



without exceeding the SCAQMD Regional Thresholds for this pollutant. Similarly, while development of the Project site in a different location may avoid the Project's significant and unavoidable impact due to non-compliance with the MSHCP Conservation Criteria affecting the northern 45.4 acres of the Project site, the fact of the matter is that the northern 45.4 acres still would be exempt from MSHCP compliance pursuant to the Settlement Agreement (refer to EIR subsection 2.4.4), would not contribute to the assemblage of MSHCP conservation areas, and likely ultimately would be developed with other land uses. Furthermore, development of the Project at a different location would merely shift the Project's near-term impacts to transportation/traffic to a different location, and it is likely that similar or more severe near-term impacts could occur at off-site locations due to the timing of regional improvements or the lack of established funding programs for required improvements. For these reasons, the City of Lake Elsinore finds that evaluation of an alternative site location is not required for the Project because alternative site locations would not reduce or avoid the Project's significant environmental effects.

6.3 ALTERNATIVE ANALYSIS

The following discussion compares the impacts of each alternative considered by the Lead Agency with the impacts of the proposed Project, as detailed in EIR Subsection 4.0, *Environmental Analysis*. A conclusion is provided for each impact as to whether the alternative results in one of the following (1) reduction or elimination of the proposed Project's impact, (2) a greater impact than would occur under the proposed Project, (3) the same impact as the proposed Project, or (4) a new impact in addition to the proposed Project's impacts. Table 6-1, *Alternatives to the Proposed Project – Comparison of Environmental Impacts*, located at the end of this Section, compares the environmental hazard and resource impacts of the alternatives with those of the proposed Project and identifies the ability of the alternative to meet the basic objectives of the Project. As described in EIR Subsection 3.1, the underlying purposes of the proposed Project are to develop a single-family residential community with commercial areas, as well as comply to the greatest feasible extent with applicable City of Lake Elsinore standards, codes, and policies. The additional basic objectives of the proposed Project are:

- A. To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.
- B. To establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.
- C. To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to Stovepipe Creek, where practical.
- D. To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Lake Elsinore and surrounding communities.



- E. To construct commercial and hotel uses within proximity to regional transportation facilities that will provide for employment opportunity and that can attract tenants at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local economy.
- F. To provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of Project residents and residents of surrounding communities.
- G. To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.
- H. To establish development phasing that results in logical coordinated growth.
- I. To develop the site with complementary mixed uses in a manner that preserves, to the extent feasible, natural drainages.

6.3.1 NO PROJECT / NO DEVELOPMENT ALTERNATIVE (NDA)

The No Project/No Development Alternative (NDA) considers no new development/disturbance on the Project site following completion of site reclamation activities beyond that which occurs under existing conditions. As such, the 72.5-acre Project site would consist of undeveloped land that is routinely disced as part of on-going fire abatement activities. Under this Alternative, no improvements would be made to the Project site and none of the Project's roadway, utility, and other infrastructure improvements would occur. This Alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the Project site in its existing (i.e., post-reclamation) conditions, in conformance with CEQA Guidelines § 15126.6(e)(3)(B).

A. Aesthetics

The NDA considers no development or disturbance on the Project site beyond that which occurs under existing conditions, including on-going reclamation activities. As such, following reclamation, the 72.5-acre site would remain undeveloped and vacant land that is routinely disced for fire abatement purposes. Thus, the Project's less-than-significant impacts to scenic vistas would be avoided under this Alternative. Although the Project site is not visible from any officially-designated scenic highways, implementation of the NDA would result in reduced visual effects to nearby County-eligible highways, including I-15 and SR-74 as compared to the proposed Project. Although the Project is not expected to degrade the existing visual character or quality of the site or its surroundings, implementation of the NDA would retain the areas visual character and impacts would be reduced in comparison to the Project. There would be no new sources of light or glare under the NDA, and impacts associated with light and glare would be reduced in comparison to the proposed Project.

B. Air Quality

Under the NDA, no development would occur on the Project site; therefore, there would be no potential sources of short-term (construction) or long-term (operational) emissions. There also would be no potential sources



of construction-related odors associated with this Alternative. With respect to construction-related emissions, the NDA would avoid the Project's near-term impacts due to NO_x emissions, and also would eliminate the Project's localized emissions of PM_{2.5}, although mitigation is proposed to reduce the Project's impacts to less-than-significant levels. Additionally, the NDA would avoid the Project's long-term operational impacts due to NO_x emissions that exceed the SCAQMD Regional Thresholds. The NDA also would avoid the Project's conflict with the AQMP due to near- and long-term NO_x emissions.

C. Biological Resources

The NDA would leave the Project site in its existing (post-reclamation) condition and no development would occur on the site. Thus, the NDA would avoid the Project's impacts to sensitive species, including burrowing owl, native bird nests, and habitat for the California glossy snake and coast patch-nosed snake. The NDA also would avoid the Project's impacts to sensitive habitats, including 0.38 acre of Riversidean sage scrub, 0.40 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 1.73 acres of disturbed Riversidean sage scrub-encelia dominant. The NDA also would avoid the Project's impacts to jurisdictional waters, including direct impacts to 0.44 acre of CDFW and RWQCB jurisdiction (including 0.07 acre of Riversidean alluvial fan sage scrub). Although Project impacts to wildlife movement corridors would be less than significant, the NDA would provide for greater local wildlife movement opportunities as compared to the Project. Both the Project and the NDA would be consistent with the Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan (HCP). Additionally, the NDA would avoid impacts to the burrowing owl and associated habitat. Although implementation of the NDA would reduce the Project's unavoidable impact due to a conflict with the MSHCP, there would be no land dedication as part of the NDA and no part of the Project site would be considered conserved pursuant to the MSHCP; therefore, while impacts would be reduced due to the fact the Project site would remain undeveloped, the NDA would not eliminate the Project's significant and unavoidable impact due to a conflict with the Cell Conservation Criteria affecting the northern 45.4 acres of the Project site.

D. Geology and Soils

Under the NDA, no grading and/or earthmoving activities would occur and no habitable structures would be constructed on the Project site. Therefore, there would be no potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, and/or seismic-related ground failure. Under this Alternative, on- or off-site landslide, lateral spreading, subsidence, liquefaction, collapse, soil instability, or expansive soils could occur as a result of natural forces; however, because no development would occur, there would be no structures located on a geologic unit or soil that is unstable. Since no grading activities would occur under the NDA and no cut and fill slopes would be created, hazards associated with unstable soils would not occur under the NDA. No substantial changes to the site topography would occur under this Alternative, since it does not propose to alter the site from its current (i.e., post-reclamation) condition.

Under the NDA, because no development would occur, soil erosion and the loss of topsoil due to natural forces (wind and rain) would continue in the absence of regulations such as a NPDES, a SWPPP, and SCAQMD Rule 403, Fugitive Dust, which would regulate the proposed Project so that potential impacts associated with soil erosion and the loss of topsoil would be mitigated. Accordingly, any potential impacts associated with geology



and soils, with the exception of soil erosion and the loss of topsoil that would occur as a result of natural processes, would be avoided under the NDA. Impacts associated with soil erosion and the loss of topsoil would be slightly increased under the NDA.

E. Greenhouse Gas Emissions

As noted in EIR Subsection 4.6, Greenhouse Gas Emissions, an individual project such as the proposed Project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. Under the NDA, no development would occur on the Project site; therefore, there would be no new potential sources of cumulative near-term or long-term GHG emissions. Accordingly, because no development would occur under this Alternative, the proposed Project's less-than-significant impact (with mitigation) would be avoided under this Alternative. Neither the NDA nor the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts due to GHGs would be reduced under the NDA.

F. Hazards and Hazardous Materials

Because no development would occur under the NDA, no potential impacts associated with the routine transport, use, or disposal of hazardous materials or foreseeable upset or accident conditions involving the release of hazardous materials into the environment, would occur. Although Project impacts due to the emission of hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (i.e., Temescal Canyon High School), because no development would occur impacts to schools would be reduced under this alternative. The Project site is not listed on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, neither the proposed Project nor the NDA have the potential to result in impacts associated with hazardous materials sites. Neither the proposed Project nor the NDA would be inconsistent with an Airport Master Plan. No public airports or private airstrips currently operate within two miles of the Project site; therefore, neither the proposed Project nor the NDA would result in a safety hazard for residents or workers in the Project area. Because the Project site is not identified as part of an emergency response plan or emergency evacuation plan, neither the NDA nor the Project would result in significant impacts due to impairment of evacuation or emergency plans.

The northern portion of the Project site is located in an area identified as having a "High" susceptibility to wildfires, while the northern most boundary of the Project site along Nichols Road and the southern 27.1 acres of the Project site are identified as having a "Very High" susceptibility to wildfires (Lake Elsinore, 2011b, Figure 3.10-2). The proposed Project would implement a Fire Protection Plan that would incorporate fuel management zones that would minimize the risk of wildfires affecting the site. Under the NDA, there would be no Fire Protection Plan, although the site would continue to be routinely disced as part of fire abatement activities. Nonetheless, because the NDA would retain the site in its natural (post-reclamation) condition, the risk of the Project site contributing to wildfire hazards in the area would be increased as compared to the proposed Project.

G. Historic and Archaeological Resources

Based on the Project's archaeological assessment, the Project site contains one prehistoric resource site (Site P-33-026830) and one historic site (Site RIV-8120), neither of which are evaluated as significant under CEQA.



The NDA would not entail any construction activities, and thus would avoid all impacts to these archaeological sites. No cemetery or human remains are known to be present on the Project site. Because no ground-disturbing activities would occur under the NDA, there is no potential to uncover any previously unknown human remains or previously unknown archeological resources buried beneath the surface. This Alternative would avoid all of the ground-disturbing activities of the proposed Project; therefore, this Alternative would avoid all of the proposed Project's impacts (considered less-than-significant with mitigation) to cultural resources. Accordingly, all potential impacts associated with cultural resources would be avoided under this Alternative.

H. Hydrology and Water Quality

Because no grading or development of the Project site would occur under the NDA, no changes to existing hydrology and drainage conditions would occur. No storm water improvements would be constructed and rainfall would continue to exit the site as sheet flow, as occurs under existing conditions. Because this Alternative would not implement mandatory SWPPP and NPDES measures to reduce erosion and sedimentation, erosion and sedimentation would be greater under this Alternative. Accordingly, the proposed Project's potential impacts associated with hydrology and water quality, with the exception of uncontrolled erosion and sedimentation and its potential impacts on water quality, would be avoided under this Alternative.

The NDA would allow for greater on-site groundwater recharge compared to the proposed Project due to the avoidance of an increase in impermeable surfaces at the site that would occur as a result of Project implementation. Thus, the Project's less-than-significant impact due to groundwater recharge would be reduced under this alternative.

The proposed Project would install a comprehensive system of storm drain improvements and water quality retention basins that would convey storm water runoff off-site in a manner that would not cause substantial flooding on- or off-site, resulting in a reduction in peak flows from the Project site. Thus, downstream erosion impacts would be reduced under the proposed Project as compared to the NDA. Compared to the proposed Project, the NDA also would increase impacts to the capacity of existing or planned storm water drainage systems as well as polluted runoff because it would not result in the storm drain improvements and water quality retention basins that are proposed by the Project.

Neither the proposed Project nor the NDA would result in the construction of housing or structures within a mapped flood hazard area. Thus, impacts associated with housing or structures in flood plains would not occur under the NDA or the proposed Project.

I. Land Use and Planning

Under the NDA, there would be no applications for a General Plan Amendment, Change of Zone, Specific Plan Amendment, or Specific Plan. Neither the NDA nor the proposed Project would have the potential to physically divide an established community, as the only residential areas surrounding the Project site occur to the east. However, the NDA would not implement the site's General Plan land uses, and would therefore result in increased impacts due to a conflict with the City's General Plan. Although implementation of the NDA would reduce the Project's unavoidable impact due to a conflict with the MSHCP, there would be no land



dedication as part of the NDA and no part of the Project site would be considered conserved pursuant to the MSHCP; therefore, while impacts would be reduced due to the fact the Project site would remain undeveloped, the NDA would not eliminate the Project's significant and unavoidable impact due to a conflict with the Cell Conservation Criteria affecting the northern 45.4 acres of the Project site.

J. Noise

Under the NDA, no construction or development would occur on site. Thus, although the Project would result in less-than-significant impacts with mitigation to nearby sensitive receptors during both construction and operation, the NDA would not result in any noise increase and thus impacts due to 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 would be avoided under this Alternative. Similarly, the Project's less-than-significant impacts due to ground borne vibration or ground borne noise levels would be avoided under this Alternative. There also would be no substantial permanent or temporary increase in ambient noise levels in the Project vicinity under the NDA, and would avoid the Project's less-than-significant impacts (with mitigation). The Project site is no located within two miles of any public or private airports. The Project site is not located within any known Airport Influence Area or Airport Safety Zone for any public airports. Thus, neither the NDA nor the proposed Project would expose sensitive receptors to excessive aircraft-related noise.

K. Paleontological Resources

The Project site has a "Low Potential" to yield nonrenewable paleontological resources. Although Project-related impacts to paleontological resources would be less than significant, the NDA would not involve the construction of any new uses, there is no potential for impacting paleontological resources. Thus, impacts under the NDA would be slightly reduced in comparison to the proposed Project.

L. Population and Housing

The NDA would not involve any new development, including utility connections, and would completely avoid the Project's less-than-significant impacts due to the inducement of substantial population growth in the area. Because there are no homes or residents on site under existing condition, neither the NDA nor the Project would result in the displacement of substantial numbers of people or housing and no impact would occur.

M. Public Services

The proposed Project's impacts to public services would be less than significant. The NDA would not result in any new development within the Project site, and would not result in any increase in demand for public services. Accordingly, the proposed Project's less-than-significant impacts associated with public services would be avoided under this Alternative.

N. Recreation

Under the NDA, there would be no development on site; thus, under the NDA, there would be no increase in demand for recreational resources. Thus, the NDA would avoid the Project's less-than-significant impacts (with mitigation) due to the construction of recreational facilities on site. The NDA also would not result in



an increase in the City's population, and therefore would avoid the Project's less-than-significant impacts due to the physical deterioration of existing recreational facilities.

O. Transportation and Traffic

Under the NDA, no new development would occur; therefore, no traffic impacts would occur. As a result, the Project's direct and cumulatively-considerable impacts to transportation/traffic would be avoided under the NDA, including impacts that are evaluated as significant and unavoidable on a direct and/or cumulatively-considerable basis. Additionally, because no traffic would be generated under this Alternative, the proposed Project's significant direct and cumulatively-considerable impacts to the local roadway system and CMP facilities would be avoided under this Alternative.

P. Tribal Cultural Resources

Under the NDA, no new ground disturbance would occur. As such, the NDA would avoid the Project's significant but mitigable impacts to Tribal Cultural Resources (TCRs) that may be buried beneath the site's surface and that could be impacted during grading and ground-disturbing activities. No impact would occur under the NDA.

Q. Utilities and Service Systems

The proposed Project's impacts associated with utilities and service systems would be less than significant. Because no development would occur under the NDA, no potential impacts would occur associated with utilities and service systems. Accordingly, implementation of the NDA would avoid the proposed Project's less-than-significant impacts to utilities and service systems.

R. Conclusion

Implementation of the NDA would result in no physical environmental impacts beyond those that have historically occurred on the undeveloped property following completion of reclamation activities on site. Almost all effects of the proposed Project would be avoided or lessened by the selection of this Alternative, although a few new impacts, such as sedimentation impacts, would be increased under this Alternative. Because this Alternative would avoid almost all of the Project's impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), if a no project alternative is identified as the environmentally superior alternative," then the EIR shall also identify an environmentally superior alternative among the other alternatives. Accordingly, the Reduced Project Alternative (RPA), as discussed in subsection 6.3.3, is identified as the environmentally superior alternative.

The NDA would fail to meet all the Project's objectives. The NDA would not result in the efficient development of the property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses. The NDA would not establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses. The NDA would not facilitate development of the site with a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to Stovepipe Creek, where practical. The NDA also



would fail to increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Lake Elsinore and surrounding communities. The NDA would fail to facilitate construction of commercial and hotel uses within proximity to regional transportation facilities that would provide for employment opportunity and that can attract tenants at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local economy. The NDA also would not provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of residents of surrounding communities. The NDA also would not involve project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing. There would be no development phasing under the NDA, and the NDA would not provide for development on the site with complementary mixed uses in a manner that preserves, to the extent feasible, natural drainages.

6.3.2 NO PROJECT / GENERAL PLAN LAND USE ALTERNATIVE (GPLUA)

The No Project/General Plan Land Use Alternative (GPLUA) considers development of the 72.5-acre Project site in accordance with the site's existing land use designations. For the northern 45.4 acres of the Project site, development would occur in conformance with the Alberhill Ranch Specific Plan (ARSP), which allows for up to 380,000 s.f. of regional general commercial uses. The southern 27.1 acres of the Project site would be developed in conformance with the underlying General Plan land use designation of "General Commercial," which allows for retail, services, restaurants, professional and administrative offices, hotels and motels, mixed-use projects, public and quasi-public uses, and similar and compatible uses. For purposes of analysis, it is assumed that the GPLUA would be developed to the maximum Floor Area Ratio (FAR) of 0.40 for the southern 27.1 acres of the site, which would allow for up to 472,190 s.f. of commercial area. Thus, this Alternative would allow for approximately 852,190 s.f. of general commercial building area, for an overall FAR of 0.27. Consistent with the NRSP, this Alternative proposes a bridge crossing over Stovepipe Creek slightly to the east of the location of the Project's proposed crossing. Similar to the proposed Project, it is assumed that Stovepipe Creek would be preserved on site on 6.5 acres. Additionally, under this alternative there would be a connection to El Toro Road/Wood Mesa Court near the Project's southeastern boundary.

A. Aesthetics

Although neither the proposed Project nor the GPLUA would result in a substantial adverse effect on a scenic vista, because commercial buildings would be developed at a greater height than residential units impacts to scenic vistas under the GPLUA would increase as compared to the proposed Project. The Project site is not visible from any officially-designated state scenic highways, and there are no scenic resources on site; thus, impacts to scenic highways would be similar under the GPLUA and the proposed Project. Neither the Project nor the GPLUA would result in the substantial degradation of the site's existing visual character, although given the intensity of development under the GPLUA impacts due to visual character or quality would be increased under the GPLUA as compared to the proposed Project, although impacts would be less than significant. Commercial land uses would result in an increase in the amount of artificial lighting at the site; thus, impacts due to lighting would be increased as compared to the Project, but would still be below a level of significance.



B. Air Quality

As indicated in Table 4-4 of the Project's Traffic Impact Analysis ("TIA," *Technical Appendix L*), development of the site with commercial land uses as proposed under the GPLUA would result in approximately 11,114 more average daily traffic (ADT) as compared to the proposed Project, or nearly three times the amount of traffic that would be generated by the Project. Thus, implementation of the GPLUA would result in a substantial increase in the Project's significant and unavoidable direct and cumulatively-considerable impact due to a conflict with the SCAQMD AQMP. Likewise, emissions of NO_x under the GPLUA would substantially increase during both construction and operation, and could result in additional exceedances of the SCAQMD Regional Thresholds, such as VOCs or PM₁₀; thus, the GPLUA would increase the Project's significant and unavoidable impact due to violation of an air quality standards, contribution of air quality pollutants to an existing air quality violation, and due to a cumulatively-considerable net increase of criteria pollutants for which the project region is non-attainment. Implementation of the GPLUA also would increase the Project's near- and long-term localized emissions, and could therefore result in increased impacts due to the exposure of sensitive receptors to substantial pollutant concentrations. While construction and operational impacts due to odors would be less than significant under both the Project and GPLUA, the GPLUA would involve more intensive construction on site, and therefore would result in an increase in the Project's less-than-significant impacts due to construction-related odors.

C. Biological Resources

The GPLUA would have a similar development footprint compared to the proposed Project and would involve similar limits of physical disturbance that could impact sensitive plant and animal species. Thus, the GPLUA would have similar impacts to the proposed Project on habitat for the California glossy snake and coast patch-nosed snake and also would result in similar impacts to the burrowing owl, nesting birds, and roosting bats. Both the Project and the GPLUA would result in significant but mitigable impacts to 0.23 acre of Riversidean sage scrub, 0.14 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 0.14 acres of disturbed Riversidean sage scrub-encelia dominant. The Project and the GPLUA would result in similar impacts to CDFW and RWQCB jurisdiction, including Riversidean alluvial fan sage scrub, although the impacts would be slightly different because the bridge over Stovepipe Creek under the GPLUA would occur slightly to the east of the bridge proposed by the Project. The Project and GPLUA both would result in similar less-than-significant impacts to migratory wildlife corridors and wildlife nursery sites. Both the Project and GPLUA would be subject to payment of fees pursuant to Lake Elsinore Municipal Code Chapters 16.85 and 19.04, thereby ensuring that impacts due to a conflict with policies or ordinances protecting biological resources would be less than significant. Although impacts to biological resources under the GPLUA and the proposed Project would be mitigated to below a level of significance, both the Project and GPLUA would conflict with the MSHCP conservation goals for MSHCP Cell Group W; thus, both the Project and the GPLUA would result in similar significant and unavoidable impacts due to a conflict with the MSHCP.

D. Geology and Soils

The Project site is not located within an Alquist-Priolo Fault Zone, but as with all areas of southern California, future buildings, residents, and visitors have the potential to be exposed to ground shaking. The potential impact would be the same for the proposed Project and the GPLUA. Additionally, the impacts due to seismic-related ground failure, ground shaking, location on a geologic unit or soil, subjectivity to geologic hazards,



grading that would affect subsurface sewage disposal systems, and location on expansive soils would be similar between the proposed Project and the GPLUA. Both the Project and the GPLUA would physically disturb a 73.8-acre on-site area, and thus have similar potential to result in deposition, siltation or erosion that may modify a river channel, an increase in water erosion, and/or an increase in wind erosion due to the similar disturbance area. Additionally, impacts associated with liquefaction, landslides, collapsible soils, mudflow, and expansive soils would be similar due to the nature of these issues being site-specific and the similar limits of disturbance inherent to both the proposed Project and the GPLUA. Thus, impacts under the GPLUA would be similar as compared to the proposed Project with respect to geology and soils.

E. Greenhouse Gas Emissions

As indicated in Table 4-4 of the Project's Traffic Impact Analysis ("TIA," *Technical Appendix L*), development of the site with commercial land uses as proposed under the GPLUA would result in approximately 11,114 more average daily traffic (ADT) as compared to the proposed Project, or nearly three times the amount of traffic that would be generated by the Project. Because a majority of the Project's GHG emissions would be associated with vehicular travel, impacts due to GHG emissions would be substantially increased under this Alternative as compared to the proposed Project. Both the Project and the GPLUA would be subject to compliance with the City of Lake Elsinore CAP, AB 32, SB 32, and the CARB Scoping Plan; however, due to the substantial increase in GHG emissions as compared to the proposed Project, it is likely that the GPLUA would result in a conflict with one or more applicable plan, policy, or regulation adopted to reduce GHGs. Thus, impacts due to GHG emissions under the GPLUA would be substantially increased as compared to the proposed Project.

F. Hazards and Hazardous Materials

Land uses that would occur on-site under the GPLUA would have the same or similar potential to handle and store hazardous material as the proposed Project. With mandatory regulatory compliance, neither the GPLUA nor the proposed Project would pose a significant hazard to the public or the environment. The proposed Project and GPLUA would have a less-than-significant impact to impair an adopted emergency response plan, emit hazardous materials within a quarter mile of a school, and be on a list of hazardous materials sites. Neither the proposed Project nor the GPLUA would require review by the Airport Land Use Commission, and neither the Project nor the GPLUA is located within an Airport Influence Area or Airport Safety Zone, and impacts would be less than significant. The Project and the GPLUA are subject to wildland fire hazards. However, both the Project and the GPLUA would be required to implement fuel modification zones between residential lots and natural open space areas. Thus, with mandatory compliance and mitigation, the Project and the GPLUA would have similar less-than-significant impacts related to hazards and hazardous materials.

G. Historic and Archaeological Resources

Based on the Project's archaeological assessment, the Project site contains one prehistoric resource site (Site P-33-026830) and one historic site (Site RIV-8120), neither of which are evaluated as significant under CEQA. The GPLUA would disturb the same area on-site as the Project and thus would result in similar impacts to these sites. No cemetery or human remains are known to be present on the Project site. Due to ground disturbing activities proposed by the Project and the GPLUA, there is a similar potential to uncover previously unknown human remains or previously unknown archeological resources buried beneath the surface. The



Project and the GPLUA would similarly not impact any existing religious or sacred uses within the proposed impact area. Accordingly, all potential impacts associated with cultural resources would be similar under this GPLUA.

H. Hydrology and Water Quality

The proposed Project would disturb the same acreage as the GPLUA. Construction-related impacts under the GPLUA would expose the same amount of soil that could result in sedimentation in runoff from the site as compared to the proposed Project. Thus, a similar impact would occur.

Under long-term operating conditions, the GPLUA would increase impervious surfaces as compared to the proposed Project because under the GPLUA the 8.3 acres that are proposed for recreational facilities under the Project would instead be developed with commercial land uses, which in turn would result in the generation of increased amounts of polluted storm water runoff as compared to the Project. Additionally, peak runoff volumes under the GPLUA would be greater in relation to the Project. Impacts under the proposed Project and the GPLUA would be mitigated to a level below significant. The GPLUA has the same potential as the proposed Project to alter the drainage pattern of the Project site. Neither the GPLUA nor the proposed Project would result in significant impacts associated with on-site flood hazards or on-site impacts due to the failure of a dam or levee.

In summary, near-term construction activities of the GPLUA would result in similar less-than-significant impacts to hydrology and water quality in comparison to the proposed Project, while the GPLUA would result in increased (though less-than-significant) hydrology and water quality impacts in comparison to the Project under long-term operational characteristics.

I. Land Use and Planning

Neither the GPLUA nor the proposed Project would result in the physical division of an established community; thus, impacts would be similar. Both the proposed Project and the GPLUA would be compatible with the surrounding land uses. The proposed Project would entail changing the site's existing General Plan, zoning, and Specific Plan classifications, while the GPLUA is consistent with existing zoning. The Project and the GPLUA would result in similar insignificant environmental effects due to an inconsistency or incompatibility associated with the existing or proposed zoning classifications or land use designations. Additionally, both the Project and the GPLUA would be consistent with all applicable policies of the General Plan and Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). However, both the GPLUA would conflict with the MSHCP Cell Criteria as applied to the northern 45.4 acres of the site, resulting in a significant and unavoidable impact to land use and planning.

J. Noise

As indicated in Table 4-4 of the Project's Traffic Impact Analysis ("TIA," *Technical Appendix L*), development of the site with commercial land uses as proposed under the GPLUA would result in approximately 11,114 more average daily traffic (ADT) as compared to the proposed Project, or nearly three times the amount of traffic that would be generated by the Project. As such, the GPLUA would result in a substantial increase in off-site traffic-related noise, and has the potential to result in the exposure of residential uses to excessive noise



levels. Thus, traffic-related noise would increase under the GPLUA. Construction characteristics associated with the GPLUA and proposed Project would be similar, although slightly more intense under the GPLUA; thus, both the GPLUA and proposed Project would be required to implement mitigation in order to reduce potential construction and ground-borne noise and vibration impacts to less-than-significant levels. Due to the increased intensity of site operations under the GPLUA as compared to the proposed Project, operational noise levels would increase and have the potential to expose nearby sensitive receptors (i.e., residences and the high school) to excessive operational-related noise; thus, impacts due to a permanent increase in noise levels would be increased under this Alternative. Neither the Project nor the GPLUA would be exposed to excessive noise levels associated with public or private airports, and impacts would be similar.

K. Paleontological Resources

The Project site was identified as having a “Low Potential” to yield nonrenewable paleontological resources. The physical disturbance area under the proposed Project and the GPLUA would be identical, impacts to paleontological resources would be identical under the Project and the GPLUA and would be less than significant due to the Project site’s “Low Potential” to yield paleontological resources.

L. Population and Housing

Neither the Project nor the GPLUA has the potential to induce substantial population growth in the area, as both would be served by infrastructure that is sized only to serve development on site. Because there are no homes or residents on site under existing condition, neither the GPLUA nor the Project would result in the displacement of substantial numbers of people or housing and no impact would occur.

M. Public Services

Development of the Project site with 852,190 s.f. of general commercial uses would result in an increased demand for fire protection and police services as compared to the Project due to the increased intensity of development. Because no residences would be constructed on site under the GPLUA, the GPLUA would avoid the Project’s less-than-significant impacts (with mitigation) to schools, parks, and libraries.

N. Recreation

The GPLUA does not propose any residential uses. Thus, the GPLUA would avoid the Project’s less-than-significant impact due to the physical deterioration of existing recreational facilities. Additionally, because no recreational facilities would be developed on site under the GPLUA, the GPLUA would avoid the Project’s less-than-significant impacts due to the construction of recreational facilities on site that may have an adverse physical effect on the environment.

O. Transportation and Traffic

As indicated in Table 4-4 of the Project’s Traffic Impact Analysis (“TIA,” *Technical Appendix L*), development of the site with commercial land uses as proposed under the GPLUA would result in approximately 18,015 Average Daily Trips (ADT) as compared to the 6,901 ADT that would be generated by the Project. Although traffic during the AM peak hour would be increased by 14 trips, peak hour trips during the peak hour would be decreased by 1,240 trips. Thus, implementation of the GPLUA would result in increased impacts due to



traffic that results in or contributes to deficient levels of service (LOS). Thus, implementation of the GPLUA would result in a substantial increase in impacts to intersections, traffic signal warrants, off-ramp queuing, freeway segments, and freeway merge/diverge locations as compared to the proposed Project. In fact, it is likely that the GPLUA would result in deficient LOS at more facilities than would occur under the proposed Project, including Riverside County Congestion Management Program (CMP) facilities. Neither the proposed Project nor the GPLUA would result in a substantial change in air traffic patterns. Both the proposed Project and the GPLUA would be designed to City standards and would not increase hazards due to a design feature. Also, land uses proposed under both the GPLUA and the Project would be compatible with school and residential uses to the south and east, respectively. Neither the GPLUA nor the Project would result in inadequate emergency access, as the Project site is not identified as an emergency access route. The Project and the GPLUA both would be required to accommodate General Plan trails and bicycle facilities, including a Class II bike lane on Nichols Road, a Regional Trail along Nichols Road, and a County Regional Trail in the southern portions of the Project site.

P. Tribal Cultural Resources

Areas proposed for disturbance under the GPLUA would be identical to the proposed Project. Although neither the Project nor the GPLUA would impact any known TCRs, both the Project and the GPLUA have the potential to impact TCRs that may be buried beneath the site's surface and that could be impacted during grading or ground-disturbing activities. As with the Project, the GPLUA would be subject to Mitigation Measures MM 4.8-1 through MM 4.8-4, which would ensure that grading and other ground-disturbing activities during construction are monitored by a qualified archaeologist as well as tribal monitors. The mitigation further requires the proper treatment of any resources that may be uncovered, and the avoidance of disturbance in areas where potential resources are uncovered. With implementation of the required mitigation, impacts would be reduced to less-than-significant levels under both the GPLUA and proposed Project, and the level of impact would be the same.

Q. Utilities and Service Systems

Selection of the GPLUA would result in an increased demand for water, sewer, and storm water drainage service/facilities than the proposed Project as the GPLUA would have more impervious surface than the proposed Project and would have a higher demand for water and sewer services. In addition, the GPLUA would result in an increased demand for solid waste collection and disposal services as compared to the proposed Project because commercial land uses generate more solid waste than residential uses. Neither the proposed Project nor the GPLUA would result in significant direct or cumulatively-considerable impacts to utilities and service systems, but impacts would be increased under the GPLUA due to the increase in development intensity as compared to the proposed Project.

R. Conclusion

As compared to the proposed Project, the GPLUA would have increased impacts to the following issue areas: aesthetics; air quality; greenhouse gas emissions; hydrology and water quality; noise; transportation and traffic; and utilities and service systems. The GPLUA would result in similar impacts under the following issue areas: biological resources; geology and soils; hazards and hazardous materials; historic and archaeological resources; land use and planning; paleontological resources; population and housing; and tribal cultural



resources. The GPLUA would result in reduced impacts to the following issues: recreation; and utilities and service systems. Impacts to fire and police services would increase under the GPLUA as compared to the Project, while impacts to schools, parks, and libraries would be reduced as compared to the Project.

The GPLUA would not meet many of the Project's objectives. The GPLUA would not provide for a complementary mix of land uses, including residential, commercial, recreational, and open space land uses. Although no Specific Plan has been adopted for the southern 27.1 acres of the site, it is likely that the GPLUA would meet the Project's objective to establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses. The GPLUA would not develop a "mixed-use community," but would meet the Project's objective to account for topographic, geologic, hydrologic, and environmental opportunities and constraints into designs for the site. The GPLUA proposes no dwelling units, and thus would not increase the available housing supply within the region. The GPLUA could be designed to meet the Project's objective to construct commercial and hotel uses within proximity to regional transportation facilities that will provide for employment opportunity and that can attract tenants at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local economy. The GPLUA would not, however, provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of residents of surrounding communities. It is anticipated that the GPLUA would meet the Project's objective to require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing. It is anticipated that the GPLUA would be developed in a logical phased manner. Although the GPLUA would not provide for a complementary mix of land uses, the GPLUA would meet the Project's objective to preserve, to the extent feasible, natural drainages on site.

6.3.3 REDUCED PROJECT ALTERNATIVE

The Reduced Project Alternative (RPA) considers development of the Project site with a reduced number of dwelling units and commercial square footage in order to reduce the Project's significant and unavoidable impacts to air quality and traffic/transportation. Specifically, the RPA accommodates up to 104 "Low-Medium Residential" dwelling units on 38.4 acres at an overall density of 2.7 dwelling units per acre (du/ac); 7.2 acres of "General Commercial" land uses, which could accommodate up to 125,453 s.f. of general commercial land uses (at a maximum Floor Area Ratio [FAR] of 0.40); 8.3 acres of "Recreational (Park)" land uses; 1.3 acres of "Open Space" land uses; "Public Institutional (Drainage Basin)" land uses on 5.5 acres; "Floodway" (open space) land uses on 6.5 acres; and 5.3 acres of backbone circulation facilities. Except for the reduction in the number of dwelling units and areas proposed for commercial, all remaining components of the RPA would be the same as the proposed Project, including areas subject to grading and disturbance. This alternative was selected for evaluation by the Lead Agency to compare the environmental effects of the proposed Project against an alternative that would reduce the Project's significant and unavoidable impacts to air quality and traffic/transportation by reducing the total number of dwelling units and commercial square footage on the Project site.



A. Aesthetics

Areas proposed for development under the RPA would be identical to the proposed Project, although there would be fewer residential dwelling units and less commercial acreage under the RPA. For both the RPA and the proposed Project, the Project site would be converted from undeveloped land to a mixed-use community. Consistent with the findings for the proposed Project, the RPA would not have a substantial adverse effect on a scenic vista, as views of regional scenic resources would continue to be available in the surrounding areas and within parks and open space areas on site. As such, impacts to scenic vistas would be similar under the proposed Project and the RPA, and would be less than significant.

The Project site is not visible from any officially-designated scenic highways. Although I-215 is identified as a “State Eligible” scenic highway, both the RPA and the proposed Project would have similar less-than-significant impacts on this facility because development of the Project site would simply appear as a continuation of existing urban development patterns in the area.

Both the Project and the RPA would be subject to compliance with the Nichols Ranch Specific Plan (NRSP), which have been crafted to ensure that future development on-site is aesthetically pleasing and not visually offensive. Although there would be a difference in land uses under the RPA, both the RPA and proposed Project would be developed in a manner that is consistent with the transitioning mixed-use character of the surrounding area, including existing residential developments to the east, commercial development to the southwest, and an existing high school to the south. In addition, with mandatory compliance to the proposed NRSP, the Project and the RPA would be developed in a manner that is not visually offensive either on-site or within the context of surrounding uses and planned development. As such, impacts to visual character and quality would be similar under the RPA and proposed Project and would be less than significant.

The Project and the RPA both would be subject to the lighting requirements set forth in the Lake Elsinore Municipal Code and in the NRSP. Thus, impacts due to lighting and glare would be similar under the Project and RPA and would be less than significant.

B. Air Quality

Implementation of the RPA would result in less construction activity overall due to the reduction in the number of dwelling units and a reduction in area devoted to general commercial land uses. Additionally, the RPA would result in a substantial reduction in operational emissions, primarily associated with traffic, due to the reduced number of dwelling units and areas proposed for commercial land uses. As such, the RPA would result in a substantial reduction in emissions of air quality pollutants as compared to the proposed Project. Although impacts would be reduced, the RPA would continue to exceed the South Coast Air Quality Management District (SCAQMD) Regional Thresholds for NO_x. As such, the RPA would result in significant and unavoidable impacts due to a conflict with the SCAQMD Air Quality Management Plan (AQMP), although such impacts would be reduced in comparison to the proposed Project.

Areas proposed for grading under the RPA would be similar to the proposed Project. As such, both the RPA and proposed Project would result in similar significant and unavoidable impacts due to NO_x emissions during construction, as the majority of construction-source NO_x emissions would be from soil import activities. With



respect to other phases of construction, the RPA proposes fewer buildings (i.e., fewer dwelling units and less commercial area) as compared to the proposed Project, so air quality emissions associated with this phase of construction would be reduced as compared to the Project. Nonetheless, both the Project and the RPA would result in significant and unavoidable impacts due to construction-related NO_x emissions, and such impacts would be similar.

For long-term operation, the RPA would result in a reduction in traffic as compared to the proposed Project due to the reduction of dwelling units and areas proposed for commercial uses. As such, air quality emissions associated with the RPA would be reduced in comparison to the proposed Project. Although impacts would be reduced under the RPA, both the RPA and proposed Project would result in operational NO_x emissions that exceed the SCAQMD Regional Thresholds, and impacts would be significant and unavoidable.

Neither the proposed Project nor the RPA would result in CO “Hot Spots.”

As noted above, areas proposed for development are similar between the RPA and proposed Project, and the same amount of grading would be required. Thus, both the Project and the RPA would result in localized air quality impacts due to PM₁₀ and PM_{2.5} emissions during construction. With implementation of applicable regulations and design requirements as well as compliance with Mitigation Measure MM 4.2-1, impacts due to localized construction emissions of PM₁₀ and PM_{2.5} that exceed the SCAQMD Localized Significance Thresholds would be reduced to less-than-significant levels.

Neither the proposed Project nor the RPA would involve stationary land uses that have the potential for air quality impacts. Additionally, neither the RPA nor the Project would attract substantial amount of mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). Thus, neither the Project nor the RPA would result in localized air quality impacts due to operational emissions.

Neither the Project nor the RPA would result in impacts due to odors during long-term operation or construction; thus, impacts would be less than significant and would be similar.

C. Biological Resources

Areas proposed for physical disturbance by the RPA are identical to the proposed Project. As such, the RPA and the proposed Project would result in identical significant impacts to sensitive species, and mitigation would be required to reduce these impacts to below a level of significance.

Similarly, because areas proposed for physical disturbance are the same, both the Project and the RPA would result in impacts to 2.58 acres of native vegetation types, including 0.38 acre of Riversidean sage scrub, 0.40 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 1.73 acres of disturbed Riversidean sage scrub-encelia dominant. Impacts to native vegetation types within the MSHCP Project Area would be less than significant due to compliance with the MSHCP in this portion of the Project site. However, for the MSHCP-Excluded Project Area, impacts to 0.23 acre of Riversidean sage scrub, 0.14 acre of disturbed Riversidean sage scrub, 0.07 acre of Riversidean alluvial fan sage scrub, and 0.14 acres of disturbed Riversidean sage scrub-encelia dominant, would represent a significant impact. With



implementation of the mitigation measures specified in EIR Subsection 4.3, impacts for the proposed Project and RPA would be reduced to less-than-significant levels and would be similar.

Both the RPA and the proposed Project would result in direct impacts to 0.44 acre of CDFW and RWQCB jurisdiction including 0.07 acre of Riversidean alluvial fan sage scrub. However, implementation of the mitigation measures specified in EIR Subsection 4.3 would reduce these impacts to less-than-significant levels.

The Project site lacks migratory wildlife corridors and wildlife nursery sites and does not occur within MSHCP Cores or Linkages. However, the Project Study Area occurs within an area that may serve a function in local wildlife movement such as dispersal and foraging. Both the Project and the RPA would preserve and avoid the on-site portion of Stovepipe Creek and preserve the majority of the sage scrub habitats located on-site which serve as local wildlife corridors. Therefore, both the Project and the RPA would have a less-than-significant impact on native resident or migratory wildlife corridors or wildlife nursery sites, and impacts would be similar.

Under both the RPA and the proposed Project, the Project Applicant would be required to comply with all applicable local policies and ordinances protecting biological resources, including Lake Elsinore Municipal Code Chapter 19.04 (requiring payment of Stephens' kangaroo rat conservation fees) and Chapter 16.85 (requiring payment of MSHCP fees). Additionally, neither the Project nor the RPA would conflict with the City's palm tree preservation program (Chapter 5.116 of the Lake Elsinore Municipal Code). Impacts would be less than significant, and would be similar for both the RPA and the proposed Project.

The northern 45.4 acres of the Project site are exempt from the MSHCP pursuant to a Settlement Agreement and Memorandum of Understanding ("Agreement") between the County of Riverside and a prior owner of the Project site. Both the RPA and the Project propose development of the northern 45.4 acres of the site, which are largely targeted for conservation under the MSHCP. As such, both the Project and the RPA would result in similar significant and unavoidable impacts due to a conflict with the MSHCP.

D. Geology and Soils

Construction and development characteristics associated with the RPA are very similar to the proposed Project. Thus, both the Project and the RPA would result in significant impacts associated with the exposure of people or structures to adverse effects, including loss, injury, or death as a result of strong seismic ground shaking. Additionally, the Project site is subject to hazards associated with lateral spreading, liquefaction, and collapse. Both the Project and the RPA would be subject to compliance with the Project's geotechnical study, as required by Mitigation Measure 4.4-1, which would reduce impacts to less-than-significant levels.

E. Greenhouse Gas Emissions

Under the RPA, emissions of greenhouse gases (GHGs) would be substantially reduced in comparison to the proposed Project due to the reduction in the number of dwelling units and commercial area. Both the Project and the RPA would be subject to compliance with the City's Climate Action Plan (CAP); however, the City's CAP does not adequately address the GHG reduction targets established by Senate Bill 32 (SB 32). However, with implementation of the mitigation specified in EIR Subsection 4.5, impacts due to GHG emissions would



be reduced to less-than-significant levels under both the Project and the RPA. Similarly, impacts due to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases would be reduced to less-than-significant levels under both the Project and the RPA with implementation of the required mitigation. Nonetheless, because overall emissions would be reduced under the RPA (especially due to the reduction in vehicular traffic), impacts due to GHG emissions would be reduced under the RPA as compared to the proposed Project.

F. Hazards and Hazardous Materials

During construction and operation of both the Project and the RPA, mandatory compliance with federal, state, and local regulations would reduce to less-than-significant levels impacts due to a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. However, because the RPA would introduce fewer commercial uses than the proposed Project, potential impacts would be reduced under the RPA in comparison to the proposed Project.

Under existing conditions, no hazards were found on the Project site; thus, no impacts due to existing site contamination would occur under the Project or RPA. During construction and operation, mandatory compliance with federal, state, and local regulations would ensure that the Project and the RPA would not create a significant hazard to the public or the environment through accident conditions involving the release of hazardous materials. Thus, the Project and the RPA would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials in the environment. However, due to the reduction in commercial area, the RPA would have slightly reduced impacts in comparison to the proposed Project.

The Project site is located immediately adjacent to the Temescal Canyon High School. The only component of the Project or the RPA that would have the potential to emit hazardous emissions or handle hazardous materials on-site would gas station uses within the proposed commercial area. Any proposed gas station would handle hazardous materials within one-quarter mile of a school; however, any such gas station's hazardous emissions would be below the cancer-related hazardous risk threshold established by SCAQMD and would be subject to regulatory requirements and routine inspections. The remaining proposed uses for the Project site by the RPA and proposed Project are not associated with the transport, use, or disposal of significant quantities of hazardous materials. Thus, the Project's impact due to emitting hazardous emissions or handle hazardous materials within one-quarter mile of an existing or proposed school would be less than significant under both the Project and RPA, although impacts under the RPA would be reduced in comparison to the proposed Project if no gas station were proposed.

The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5. Accordingly, no impact would occur under the RPA or the proposed Project, and impacts would be similar.

The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest public airport is the March Air Reserve Base, located approximately 12 miles northeast of the Project site, and the Project is not located within the AIA of the March Air Reserve Base. The nearest airport to the proposed Project is Skylark Field, a private use airport located 5.7 miles southeast of the Project



site. The Project site is not within the AIA for Skylark Field. As such, neither the proposed Project nor the RPA would expose people residing or working in the area to safety hazards associated with public airports, and impacts would be less than significant and similar under both alternatives.

The Project site is located approximately 5.7 miles southeast of the Skylark Field, which is the nearest private airstrip to the Project site. The Project site is not located within the AIA for this facility, and operations at Skylark Field are unlikely to create a safety hazard for people working or residing in the Project area. Impacts would be less than significant under both the RPA and proposed Project, and impacts would be similar.

Neither the Project nor the RPA would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No emergency facilities exist on the Project site, and the site does not serve as an emergency evacuation route and the Project would be required to maintain access during construction. Thus, both the Project and RPA would result in similar less-than-significant impacts.

According to the City of Lake Elsinore General Plan Update EIR, the Project site is identified as having a “High” and “Very High” susceptibility to wildfires. Nichols Road, El Toro Road, Wood Mesa Court, and I-15 would provide buffers around the Project site. A buffer distance of between 30-60 feet as provided by these roads and the buffer as provided by I-15 would reduce the site’s potential for fire hazards. In addition, both the Project and the RPA would be subject to mandatory compliance with the recommendations of the FPP as required by the NRSP, which requires implementation of fuel modification zones and other fire hazard design features on the Project site. Furthermore, the Project site under both the Project and the RPA would be developed in a manner consistent with jurisdictional requirements for fire protection and would generally decrease the fire hazard in the local area. As such, impacts regarding wildland fires would be less than significant under both the RPA and the proposed Project. However, because the RPA would introduce fewer structures and residents/workers to the Project site as compared to the Project, impacts due to fire hazards would be slightly reduced under the RPA as compared to the proposed Project.

G. Historic and Archaeological Resources

Areas subject to physical disturbance by the RPA would be identical to the proposed Project. Both the Project and RPA would impact one (1) known historical resource (Site RIV-8120) on the Project site. However, Site RIV-8120 is not determined significant pursuant to the criteria given in CEQA Guidelines § 15064.5. Also, there are no other known archaeological resources at the Project site. Accordingly, the Project and RPA would result in less-than-significant impacts to known significant historical resources. Regardless, there is a potential that historical resources may be buried beneath the surface of the site that meet the CEQA definition of a significant resource which could not be unearthed during the Project’s construction process. If such resources are unearthed and are not properly identified and treated, the impact would be significant on both a direct and cumulative basis for both the RPA and proposed Project. With implementation of the mitigation measures identified in EIR Subsection 4.7, impacts would be reduced to less-than-significant levels.

Additionally, there is a potential that archaeological resources may be buried beneath the surface of the site that meet the CEQA definition of a significant resource which could be unearthed during construction of the proposed Project or RPA. If such resources are unearthed and are not properly identified and treated, the



impact would be significant. With implementation of the mitigation measures identified in EIR Subsection 4.7, impacts would be reduced to less-than-significant levels.

The Project site does not contain a cemetery and no known cemeteries are located within the immediate site vicinity. In the unlikely event that human remains are discovered during grading or other ground-disturbing activities associated with the Project or the RPA, the Project and RPA would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 et. seq. Mandatory compliance with State law would ensure that human remains, if encountered, are appropriately treated and would preclude the potential for significant impacts to human remains.

H. Hydrology and Water Quality

With implementation of the BMPs from the SWPPP and the WQMP prepared for the Project (which would also apply to the RPA) as well as implementation of the drainage plan that includes two (2) drainage basins for both the Project and RPA, impacts would be less than significant. Because areas proposed for development are similar, impacts under the RPA and Project would be similar.

The Project and the RPA would have a reliable source of domestic water and would not require any new potable water wells that would directly extract groundwater. Groundwater recharge would occur in on-site drainage basins and landscaped areas, and water conveyed off-site would have the ability to percolate into the groundwater table. The Project and RPA would not 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, and the impact would be less than significant. However, because the RPA would require less water than the proposed Project, impacts to groundwater would be reduced under the RPA as compared to the proposed Project.

Implementation of the BMPs from the required SWPPP and the on-site drainage basins would ensure that construction and operation of the Project and the RPA would not result in substantial erosion or siltation on- or off-site or contribute runoff storm water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Accordingly, impacts would be less than significant and would be similar under the RPA and proposed Project.

With implementation of the drainage plan (including the two [2] proposed drainage basins) included as an applicable City Regulation, which would be similar under the Project and the RPA, the Project and the RPA would result in the reduction of peak storm water discharge flows compared to existing conditions. Because the proposed Project and RPA would be designed to attenuate post-development runoff from the site, runoff from the Project and RPA would not substantially increase the rate or amount of surface runoff in downstream areas in a manner that would result in flooding on- or off-site. A less-than-significant impact would occur, and impacts would be similar under the RPA and proposed Project.

Implementation of the Project or RPA would not require construction or expansion of storm water drainage facilities that are not already addressed herein. Construction of the proposed storm drainage improvements is an integral component of the construction phase for both the Project and the RPA, impacts for which have been evaluated throughout this subsection. In each case, impacts are found to be less than significant, or would



be reduced to less than significant levels with the incorporation of mitigation. There are no components of the on-site drainage improvements that would result in environmental effects not addressed in this EIR. Thus, a less-than-significant impact would occur under both the Project and the RPA, and impacts would be similar.

The FEMA FIRM for the Project site indicates that the majority of the Project site is not located within a special flood hazard area, except for Stovepipe Creek which is located within a special flood hazard area. The Project and RPA propose minor modifications to the flood plain limits and the Project Applicant would be required to obtain a CLOMR and LOMR from FEMA to modify the mapped floodplain boundaries. Following the modification of the floodplain boundaries on-site, no development would occur within the revised flood zones under the Project or RPA. Thus, with implementation of regulatory requirements the Project and RPA would not place housing or structures within a 100-year flood hazard area and would not impede or redirect flood flows. Accordingly, potential impacts associated with placing housing or structures within a 100-year flood zone would be less than significant and would be similar under the RPA and proposed Project.

The Project site is located approximately 1.7 miles north of a levee associated with Lake Elsinore, and 4.7 miles northwest of the Railroad Canyon Dam. According to the City of Lake Elsinore General Plan EIR, the Project site is located outside of dam inundation zones. Furthermore, compliance with the City of Lake Elsinore General Plan “Policy and Implementation Plan” applicable to dam inundation as well as the construction of the two (2) drainage basins on-site would ensure that any potential dam inundation hazards associated with future development would be less than significant for both the Project and the RPA. Impacts would be similar.

Based on the 1.8-mile distance and change in topography between Lake Elsinore (the nearest large body of water) and the Project site, the Project and RPA would not be subject to inundation by seiches associated with the body of water. Impacts associated with inundation by seiche would be less than significant. Additionally, due to the approximately 25-mile distance of the Project site from the Pacific Ocean, there is no potential for a tsunami to affect the Project site, and no impact would occur under the Project or RPA. With implementation of the BMPs from the Project-specific SWPPP and Mitigation Measure MM 4.4-1 (refer to EIR Subsection 4.4.7), i hazards associated with mudflows would be less than significant under the Project and RPA. Impacts would be similar under the RPA and proposed Project.

I. Land Use and Planning

The Project and RPA would not physically disrupt or divide any established communities, and no impact would occur under either alternative.

Although the Project and the RPA would require changes the site’s existing General Plan land use and zoning classifications, neither the Project nor the RPA would result in a significant environmental effect due to an inconsistency with the site’s existing or proposed zoning. Furthermore, the Project and RPA would be consistent with the General Plan and SCAG RTP/SCS goals. Impacts due to a conflict with the land use designations and policies of the General Plan and other planning documents would be less than significant and would be similar under both the RPA and proposed Project.



Under both the Project and the RPA, impacts due to a conflict with the SKR HCP would be less than significant, and impacts due to a conflict with the MSHCP on the southern 27.1 acres of the Project site would be less than significant with the mitigation measures identified in Subsection 4.3 and mandatory payment of MSHCP fees. Although the northern 45.4 acres are exempt from the Western Riverside County MSHCP, neither the Project nor the RPA would implement the MSHCP Conservation Criteria for MSHCP Cell Group W. As such, neither the Project nor the RPA would comply with the MSHCP conservation objective for the northern 45.4 acres of the site. This represents a significant and unavoidable impact of both the Project and RPA. Impacts under both alternatives would be similar.

J. Noise

Both the Project and the RPA would result in construction-related noise levels that exceed the City of Lake Elsinore stationary construction equipment noise level standards for residential and semi-residential (school) uses, although these impacts would be reduced to less-than-significant levels with implementation of the mitigation measures specified in EIR Subsection 4.10. However, because less development would occur under the RPA, near-term construction-related noise impacts would be reduced under the RPA as compared to the proposed Project.

Under both the Project and RPA, off-site traffic-related noise impacts would be less than significant, although such noise impacts would be reduced under the RPA due to the reduction in traffic as compared to the proposed Project.

Both the Project and the RPA would introduce residential structures into areas that may be affected by traffic-related noise or noise associated with operation of the commercial areas on site. Interior and exterior noise impacts associated with the RPA would be slightly increased relative to the proposed Project because the RPA proposes residential units near I-15. Nonetheless, implementation of the mitigation measures identified in EIR Subsection 4.10 would reduce impacts to less-than-significant levels.

Additionally, under the Project and RPA, operational noise levels affecting sensitive off-site receiver locations have the potential to exceed the nighttime exterior noise level standards established by General Plan Policy 7.1. Such impacts would be reduced to less-than-significant levels with implementation of the mitigation measures identified in EIR Subsection 4.10. However, due to the reduction in areas proposed for commercial, such impacts would be reduced under the RPA as compared to the proposed Project.

Moreover, the Project would contribute operational noise level increases over the existing ambient noise levels which ranging from 0.1 to 0.8 dBA L₅₀ during the daytime hours and nighttime hours, which would satisfy the significance criteria discussed in subsection 4.10.4. Impacts under the Project would be less than significant. As the RPA proposes fewer commercial uses, the RPA would reduce the Project's less-than-significant impacts due to operational-related cumulative noise contributions.

Construction characteristics associated with the RPA would be similar to the proposed Project. As demonstrated in Subsection 4.10, the Project would not create vibration levels exceeding 0.01 in/sec with implementation of the mitigation identified in EIR Subsection 4.10. The RPA would similarly be required to incorporate mitigation to reduce construction-related vibration impacts to less-than-significant levels.



However, because the RPA proposes fewer buildings than the Project, impacts associated with groundborne vibration would be reduced under the RPA.

Traffic associated with the Project and the RPA would not cause or contribute to a significant noise impact affecting nearby sensitive receptors under any scenario evaluated in the Project's NIA and TIA. However, the operational noise levels associated with the proposed Project and the RPA would exceed the nighttime exterior noise level standards at nearby sensitive receptors, which represents a significant impact. Implementation of the mitigation measures identified in Subsection 4.10 would reduce such impacts to less-than-significant levels. However, because the RPA proposes fewer commercial uses, impacts under the RPA would be reduced in comparison to the proposed Project.

Construction noise levels associated with the Project and RPA, when the highest reference noise level is operating at a single point nearest the sensitive receiver location, would exceed the City of Lake Elsinore stationary construction equipment noise level standards for residential and semi-residential (school) uses. However, impacts would be reduced to less-than-significant levels with implementation of the mitigation measures identified in EIR Subsection 4.10. Nonetheless, due to the decrease in development intensity associated with the RPA, the RPA would result in reduced construction-related impacts as compared to the proposed Project.

The closest airport is Skylark Field which is located approximately 5.7 miles southeast of the Project site. The Project site is not located within the AIA of the closest airport, Skylark Airport, and is not subject to substantial noise levels associated with airport operations. Further, the Project site is not located within an airport land use plan or within 2 miles of a public airport. The Project site would not be exposed to aircraft-related noise exceeding 55 dBA CNEL, which is considered "clearly acceptable" by the Riverside County ALUCP for residential and commercial development. Accordingly, neither the Project nor the RPA would result in the exposure of people residing or working at the Project site to excessive airport- or aircraft-related noise, and no impact would occur under either alternative.

K. Paleontological Resources

The Project site has a "Low Potential" to yield nonrenewable paleontological resources. There were no surface-exposed fossils or fossiliferous sedimentary units found during the field survey conducted by BFSa. In addition, the metamorphic and late Quaternary young alluvial fan sediments across the entire Project site indicates a low likelihood that any fossiliferous deposit would be present within the Project area and its surrounding areas. Thus, neither the Project nor the RPA would impact any known paleontological resource or unique geological feature. Impacts would be less than significant and would be similar under either alternative.

L. Population and Housing

Implementation of the Project or the RPA would exceed local and regional projections. However, impacts associated with the proposed increases in population on-site have been evaluated herein, and mitigation measures have been imposed where necessary to reduce impacts to the maximum feasible extent. Therefore, impacts due to direct and indirect population growth would be less than significant under both the Project and



the RPA would be less than significant, although impacts under the RPA would be reduced because the Project proposes fewer residential dwelling units, and thus, a reduction in population as compared to the Project.

Neither the Project nor the RPA would result in the displacement of housing that could result in the construction of replacement housing; rather, the development of residential units would further augment the housing supply in the region. Thus, no impact associated with inducing housing demand would occur under the Project or RPA and impacts would be similar.

The Project site is undeveloped; thus, the Project would not displace substantial numbers of people and would not result in the need for construction of replacement housing elsewhere. Both the Project and the RPA would involve the development of the site with new residential units, resulting in an improvement to the housing supply in the region. Therefore, no impact associated with population displacement would occur under the Project or RPA and impacts would be similar.

M. Public Services

With payment of mandatory DIF fees, potential direct and cumulatively-considerable impacts to the RCFD under the Project and RPA would be reduced to less-than-significant levels, and neither the Project nor the RPA would result in or require the construction of new fire protection facilities that could result in a significant impact to the environment. However, due to the reduction in development intensity under the RPA, impacts under the RPA would be reduced in comparison to the proposed Project.

With payment of mandatory DIF fees, potential direct and cumulatively-considerable impacts to the RCSD under the Project and RPA would be reduced to less-than-significant levels, and neither the Project nor the RPA would result in or require the construction of new police protection facilities that could result in a significant impact to the environment. However, due to the reduction in development intensity under the RPA, impacts under the RPA would be reduced in comparison to the proposed Project.

The Project and RPA both would generate a new student population that would not be accommodated within LEUSD's existing capacity. Although the LEUSD would need to construct new school facilities to meet the growing demand within this part of Lake Elsinore, there are no current publicly-available plans detailing where such facilities would be built. Although the Project and RPA would contribute to the need for new or expanded school facilities, it is not possible to identify environmental impacts that may be associated with the construction of new or expanded school facilities until a specific proposal and design for the facility is prepared by the LEUSD, and an analysis of potential physical environmental impacts resulting from the construction and operation of new or expanded school facilities would be speculative in nature (see CEQA Guidelines § 15145). Environmental effects of such school facilities and any associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded school facilities. Any mitigation measures required for new or expanded school facilities could be funded, in part, from property taxes and/or through payment of school impact fees. Furthermore, the payment of mandatory school impact fees would ensure that neither the Project nor the RPA would result in significant direct or cumulatively-considerable impacts to the ability of the LEUSD to provide for school services. The Project and RPA would not require the construction of new school facilities that could result in a significant impact to



the environment. However, due to the reduction in dwelling units associated with the RPA, the RPA would result in reduced impacts to schools as compared to the proposed Project.

With construction of public parkland on-site as required by the City of Lake Elsinore's Park and Recreation Master Plan, the direct and cumulatively-considerable park impacts to the City of Lake Elsinore would be reduced to less-than-significant levels under the proposed Project and RPA. Additionally, neither the RPA nor the proposed Project would result in or require the construction of new parkland that could result in a significant impact to the environment. Notwithstanding, impacts to parks would be reduced under the RPA because the RPA proposes fewer dwelling units than the proposed Project but the same amount of on-site parkland.

Although the Project and RPA both would contribute to a need for new or expanded library facilities, it is not possible to identify environmental impacts that may be associated with such new or expanded library facilities until a specific proposal and design for such facilities are prepared by the City of Lake Elsinore. Accordingly, impacts due to the construction of new or expanded library facilities are too speculative for evaluation in this EIR (CEQA Guidelines § 15145). Environmental effects of such library facilities and associated mitigation would be identified through a future CEQA process required in association with any future proposals for new or expanded library facilities. However, the Project and the RPA would be required to contribute DIF fees, which would be used in part to provide for library space and/or new book volumes. Accordingly, with payment of DIF fees, impacts to library services and facilities associated with the Project and the RPA are evaluated as less than significant on both a direct and cumulatively-considerable basis. However, because the RPA proposes fewer dwelling units than the proposed Project, impacts to libraries under the RPA would be reduced.

N. Recreation

Both the Project and the RPA would provide a total of 8.3 acres of public parkland on-site, which would exceed the amount of parkland required by the City of Lake Elsinore Parks and Recreation Plan. Given the excess amount of parkland planned within the area, it is unlikely that future residents of the Project or the RPA would utilize parkland resources outside of the Project site boundaries to the point that physical deterioration of such facilities would occur or would be accelerated. Moreover, it is likely that any incremental increase in the use of existing recreational uses as a result of the Project or the RPA would be off-set by existing City residents utilizing proposed recreational facilities on-site. Thus, impacts to existing parks and recreation facilities in the region would be less than significant under both the Project and the RPA. However, because the RPA proposes the same amount of parkland on site as the Project but proposes fewer dwelling units, impacts to existing recreational facilities would be reduced under the RPA as compared to the proposed Project.

A 6.5-acre linear park, a 1.8-acre neighborhood park, trails, and a Class II bicycle lane per the City's General Plan are proposed on the Project site as part of both the RPA and the proposed Project. Effects associated with the physical construction of these facilities are addressed under the relevant issue areas identified herein. As concluded throughout this document, direct and cumulative impacts associated with construction of the on-site park facilities would be less than significant or would be reduced to the maximum feasible extent with the implementation of mitigation measures identified herein. Thus, impacts under both the Project and RPA would be similar because the RPA and Project propose the same areas for park and recreation resources on site.



O. Transportation and Traffic

Both the Project and the RPA would result in direct and/or cumulatively-considerable impacts to study area transportation facilities. However, impacts under the RPA would be significantly reduced under the RPA as compared to the proposed Project due to the reduction in the number of dwelling units and commercial areas. Notwithstanding, although impacts to transportation facilities would be reduced under the RPA, significant and unavoidable impacts to study area facilities still would occur. Such impacts, while less than those associated with the Project, would result from one or more of the following factors: 1) improvements required to achieve an acceptable Level of Service (LOS) are funded by a local or regional funding program (i.e., DIF or TUMF), but it cannot be assured that the improvements would be in place prior to the facilities experiencing a deficient LOS; 2) although fair-share monetary contributions have been identified for the Project's cumulatively-considerable impacts, a funding program does not currently exist for the facility and it cannot be assured that required improvements would be in place prior to the facility experiencing a deficient LOS; and/or 3) the affected facility is under the jurisdiction of another agency (e.g., Caltrans), and no funding programs exist beyond regional programs (e.g., TUMF) to implement improvements needed to achieve an acceptable LOS.

Likewise, both the Project and the RPA would result in significant and unavoidable impacts to CMP facilities, impacts under the RPA would be significantly reduced due to the reduction in the number of dwelling units and commercial area as compared to the Project.

There are no components of the proposed Project or the RPA 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. Accordingly, impacts would be less than significant under both alternatives, and impacts would be similar.

Neither the proposed Project nor the RPA would create or substantially increase safety hazards due to a design feature or incompatible use, and impacts would be less than significant and similar under both alternatives.

Due to temporary lane closures that may occur during the construction phase for both the Project and the RPA, such construction activities may conflict with emergency access routes and access to nearby uses during frontage improvements to Nichols Road and the proposed connection to El Toro Road via B Street. Construction traffic would be required to comply with a temporary traffic control plan that meets the applicable requirements of the California Manual on Uniform Traffic Control Devices, as required by the mitigation specified in EIR Subsection 4.15. Because improvements under the Project and RPA would be similar, temporary construction-related impacts would be similar under both alternative.

Neither the proposed Project nor the RPA would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities), and impacts would be less than significant and similar under both alternatives.

P. Tribal Cultural Resources

Areas proposed for disturbance under the RPA would be identical to the proposed Project. Although neither the Project nor the RPA would impact any known TCRs, both the Project and the RPA have the potential to



impact TCRs that may be buried beneath the site's surface and that could be impacted during grading or ground-disturbing activities. As with the Project, the RPA would be subject to Mitigation Measures MM 4.8-1 through MM 4.8-4, which would ensure that grading and other ground-disturbing activities during construction are monitored by a qualified archaeologist as well as tribal monitors. The mitigation further requires the proper treatment of any resources that may be uncovered, and the avoidance of disturbance in areas where potential resources are uncovered. With implementation of the required mitigation, impacts would be reduced to less-than-significant levels under both the RPA and proposed Project, and the level of impact would be the same.

Q. Utilities and Service Systems

Neither the Project nor the RPA would exceed wastewater treatment requirements of the Santa Ana RWQCB. The EVMWD would provide wastewater treatment and collection services to the site, and the EVMWD is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB. Thus, a less-than-significant impact would occur under both the RPA and proposed Project, and impacts would be similar under both alternatives.

Wastewater treatment services would be provided by the EVMWD, which has existing and projected capacity to serve existing and planned development within its service area. Thus, neither the Project nor the RPA would result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Additionally, neither the Project nor the RPA would result in a determination by the EVMWD that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitment. Therefore, impacts would be less than significant, although impacts under the RPA would be reduced due to the reduction in the number of dwelling units and commercial area as compared to the proposed Project.

The UWMP bases its growth assumptions, in part, based on the land use designations of General Plans within the EVMWD's service area, and both the proposed Project and the RPA would generate substantially less demand for potable water than development of the site with commercial uses, as assumed in the UWMP. Because the EVMWD projects that it will have sufficient water supplies even during single and multiple dry years to meet the projected demand within its district through year 2040, and because the Project and RPA would result in less demand for potable water than is accounted for by the UWMP, it can be concluded that the EVMWD would have sufficient water supplies to serve the Project and/or the RPA and other cumulative developments based on existing entitlements and resources. Additionally, neither the Project nor the RPA would require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Therefore, impacts due to water demand would be less than significant under both the Project and the RPA, although impacts would be reduced under the RPA as compared to the Project due to the reduction in the number of dwelling units and commercial area and associated reduction in water demand.

During both construction and operation of the Project or the RPA, the amount of solid waste generated would represent a nominal increase in the existing available disposal capacity of the Perris TS/MRF, the El Sobrante Landfill, the Badlands Landfill, and the Lamb Canyon Landfill. Thus, the Project and the RPA would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal



needs and impacts would be less than significant. However, due to the reduction in the number of dwelling units and commercial area, the RPA would result in reduced impacts as compared to the proposed Project.

Existing landfills that serve the Project site are required to comply with federal, state, and local statutes and regulations related to solid waste. Compliance with federal, state, and local statutes and regulations would reduce the amount of solid waste generated by the Project and the RPA and diverted to landfills, which in turn would aid in the extension of the life of affected disposal sites. The Project and RPA would be required to comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant under either alternative, although impacts under the RPA would be reduced due to the reduction in the number of dwelling units and commercial area an attendant reduced solid waste generation.

Impacts associated with the construction of utility connections to provide electricity, natural gas, and telecommunication facilities service to the site are inherent to the construction phase, and have been evaluated herein. Where significant construction-related impacts are identified, feasible mitigation measures are identified to reduce impacts to the maximum feasible extent. There are no components of the proposed utility connections that would result in significant environmental effects not already addressed herein. Accordingly, impacts under the RPA and proposed Project would be less than significant and would be similar.

R. Conclusion

As compared to the proposed Project, the RPA would not result in increased impacts to any of the issue areas analyzed above, and would result in similar or decreased impacts to all of the issue areas analyzed above. Specifically, as compared to the proposed Project, the RPA would result in reduced impacts associated with air quality, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality (groundwater supplies), noise, population/housing, public services, recreation, transportation/traffic, and utilities/service systems. Impacts under the issues of aesthetics, biological resources, geology/soils, historic/archaeological resources, hydrology/water quality (for all but groundwater supplies), land use/planning, paleontological resources, and tribal cultural resources would be similar under the Project and the RPA.

The RPA generally would meet the Project's objectives, but less effectively than the proposed Project due to the reduction in the number of dwelling units and areas proposed for commercial land uses. The RPA would be less effective in efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses. The RPA would, similar to the Project, establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses. Both the Project and the RPA would incorporate a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to Stovepipe Creek, where practical. However, the RPA would be less effective than the proposed Project in increasing the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Lake Elsinore and surrounding communities. Additionally, as it is not known whether the commercial site could accommodate a hotel under the RPA, the RPA also would be less effective than the proposed Project in providing commercial and hotel uses within proximity to regional transportation facilities that will provide for employment opportunity and that can attract tenants at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local



economy. Both the Project and the RPA would provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of Project residents and residents of surrounding communities. Both the Project and the RPA would require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing. Further, both the RPA and proposed Project would achieve the Project's objective to establish development phasing that results in logical coordinated growth. Additionally, both the Project and RPA would develop the site with complementary mixed uses in a manner that preserves, to the extent feasible, natural drainages, although the Project would more effectively provide for a complementary mix of land uses as compared to the RPA.



Table 6-1 Alternatives to the Proposed Project – Comparison of Environmental Impacts

ENVIRONMENTAL TOPIC	PROPOSED PROJECT SIGNIFICANCE OF IMPACTS AFTER MITIGATION	LEVEL OF IMPACT COMPARED TO THE PROPOSED PROJECT		
		NO PROJECT / NO DEVELOPMENT ALTERNATIVE	NO PROJECT / GENERAL PLAN LAND USE ALTERNATIVE	REDUCED PROJECT ALTERNATIVE
Aesthetics	Less than Significant	Reduced	Increased	Similar
Air Quality	Significant and Unavoidable Direct and Cumulatively-Considerable Impacts	Reduced	Increased	Reduced
Biological Resources	Significant and Unavoidable Direct Impact	Reduced	Similar	Similar
Geology and Soils	Less than Significant	Reduced	Similar	Similar
Greenhouse Gas Emissions	Less than Significant	Reduced	Increased	Reduced
Hazards/Hazardous Materials	Less than Significant	Reduced	Similar	Reduced
Historic and Archeological Resources	Less than Significant	Reduced	Similar	Similar
Hydrology and Water Quality	Less than Significant	Most Issues: Reduced Erosion/Siltation: Increased	Increased	Reduced
Land Use and Planning	Significant and Unavoidable Direct Impact	Reduced	Similar	Reduced
Noise	Less than Significant	Reduced	Near-Term: Similar Long-Term: Increased	Reduced
Paleontological Resources	Less than Significant	Reduced	Similar	Similar
Population and Housing	Less than Significant	Similar	Similar	Reduced
Public Services	Less than Significant	Reduced	Police/Fire: Increased Schools/Parks/Libraries: Decreased	Reduced
Recreation	Less than Significant	Reduced	Reduced	Reduced
Transportation and Traffic	Significant and Unavoidable Direct and Cumulatively-Considerable Impacts	Reduced	Increased	Reduced
Tribal Cultural Resources	Less than Significant	Reduced	Similar	Similar
Utilities and Service Systems	Less-than-Significant	Reduced	Increased	Reduced
Objective A: To efficiently develop an underutilized property with a complementary mix of land uses, including residential, commercial, recreational, and open space land uses.		No	No	Yes, but less effectively
Objective B: To establish a master-planned community in a manner that is sensitive to the environment as well as visually and functionally compatible with surrounding existing and proposed land uses.		No	Yes	Yes
Objective C: To develop a mixed-use community with a design that takes topographic, geologic, hydrologic, and environmental opportunities and constraints into consideration to minimize alterations to Stovepipe Creek, where practical.		No	No	Yes
Objective D: To increase the available housing supply within the region by providing detached single-family homes in traditional subdivision layouts that will be marketable within the evolving economic profile of the City of Lake Elsinore and surrounding communities.		No	No	Yes, but less effectively
Objective E: To construct commercial and hotel uses within proximity to regional transportation facilities that will provide for employment opportunity and that can attract tenants		No	Yes	Yes, but less effectively



ENVIRONMENTAL TOPIC	PROPOSED PROJECT SIGNIFICANCE OF IMPACTS AFTER MITIGATION	LEVEL OF IMPACT COMPARED TO THE PROPOSED PROJECT		
		NO PROJECT / NO DEVELOPMENT ALTERNATIVE	NO PROJECT / GENERAL PLAN LAND USE ALTERNATIVE	REDUCED PROJECT ALTERNATIVE
at competitive lease rates to help ensure that the uses are occupied and positively contribute to the local economy.				
Objective F: To provide a system of public and community facilities, including recreational facilities and trails, in an efficient and timely manner and meet the needs of Project residents and residents of surrounding communities.		No	No	Yes
Objective G: To require project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatments, and other similar design features that would ensure the community is developed in a manner that is aesthetically pleasing.		No	Yes	Yes
Objective H: To establish development phasing that results in logical coordinated growth.		No	Yes	Yes
Objective I: To develop the site with complementary mixed uses in a manner that preserves, to the extent feasible, natural drainages.		No	Yes	Yes, but less effectively



7.0 REFERENCES

7.1 PERSONS CONTRIBUTING TO EIR PREPARATION

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7.2 DOCUMENTS APPENDED TO THIS EIR

The following reports, studies, and supporting documentation were used in preparing the Nichols Ranch EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices is available for review at the City of Lake Elsinore Planning Division 120 South Main Street, Lake Elsinore, CA 92530.



- Appendix A: Initial Study for Nichols Ranch EIR, Notice of Preparation (NOP), and Written Comments on the NOP.
- Appendix B: Urban Crossroads, Inc., 2018a. *Nichols Ranch Air Quality Impact Analysis*. August 29, 2018.
- Appendix C: VCS Environmental, Inc. 2018. *Biological Technical Report and MSHCP Consistency Analysis for the Nichols Ranch Project*. September 2018.
- Appendix D: Terracon Consultants, Inc. 2018. *Geotechnical Investigation and Geologic Evaluation Report*. February 2, 2018.
- Appendix E: Urban Crossroads, Inc., 2018b. *Nichols Ranch Greenhouse Gas Analysis*. August 29, 2018.
- Appendix F: Terracon Consultants, Inc. 2017. *Phase I Environmental Site Assessment Tentative Tract No. 37305 South of Nichols Road and East of Interstate 15 APNs 389-200-037, 389-210-008, and 389-210-032 Lake Elsinore, Riverside County, California 92532 Terracon Project No. 60177386*. December 27, 2017.
- Appendix G: FIREWISE 2000, Inc. 2018. *Fire Protection Plan Tract 37305 Nichols Ranch Specific Plan City of Lake Elsinore County of Riverside, California*. January 25, 2019.
- Appendix H: Brian F. Smith and Associates, Inc. 2018a. *A Phase I and II Cultural Resources Assessment for the Nichols Ranch Specific Plan Project City of Lake Elsinore, Riverside County, California*. July 17, 2017 [revised: April 27, 2018].
- Appendix I1: K&A Engineering, Inc. 2018a. *Preliminary Drainage Report for Tract 37305 Nichols South Specific Plan City of Lake Elsinore*. July 2018.
- Appendix I2: K&A Engineering, Inc. 2018b. *Preliminary Specific Water Quality Management Plan, Nichols Ranch Specific Plan*. November 2018.
- Appendix J: Urban Crossroads, Inc., 2019. *Nichols Ranch Noise Impact Analysis*. January 2, 2019.
- Appendix K: Brian F. Smith and Associates, Inc. 2018b. *Paleontological Resource and Monitoring Assessment, Nichols Ranch Specific Plan Project, City of Lake Elsinore, Riverside County California*. June 21, 2017 [revised: April 26, 2018].
- Appendix L: Urban Crossroads, Inc., 2018d. *Nichols Ranch Traffic Impact Analysis City of Lake Elsinore*. December 18, 2018.
- Appendix M: Written Correspondence. (Refer to Section 7.5 for a full list of Project correspondence).



- Appendix N1: Dexter Wilson Engineering, Inc. *Water System Analysis for Tract No. 37305 in Lake Elsinore*. July 2018.
- Appendix N2: Dexter Wilson Engineering, Inc. *Preliminary Sewer System Evaluation for Tract No. 37305 in Lake Elsinore*. July 2018.

7.3 DOCUMENTS INCORPORATED BY REFERENCE

The following reports, studies, and supporting documentation were used in the preparation of this EIR and are incorporated by reference within this EIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed.

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7.5 PERSONS CONSULTED/WRITTEN OR VERBAL COMMUNICATION

The following written communications were used in preparing the Nichols Ranch Specific Plan EIR. The resources cited below are available for review at the City of Lake Elsinore Planning Division 120 South Main Street, Lake Elsinore, CA 92530, and are included as *Technical Appendix M* to this EIR.

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