

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-7 Mitigated Construction Emissions at 15-Mile Haul Distance and 138 Two-Way Haul Trips per Day

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
2015	6.65	97.92	96.60	0.20	14.92	7.82
2016	69.01	93.16	94.26	0.20	19.55	8.85
Blasting Emissions	--	--	--	--	1.29	0.27
Crushing Emissions	--	--	--	--	4.28	0.79
Maximum Daily Emissions	69.01	97.92	96.60	0.20	25.12	9.91
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

(Urban Crossroads, 2015a, Table 3-10)

Table EA-8 Mitigated Construction Emissions at 20-Mile Haul Distance and 102 Two-Way Haul Trips per Day

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
2015	6.34	96.77	91.01	0.20	14.88	7.80
2016	69.01	92.10	88.99	0.20	19.46	8.82
Blasting Emissions	--	--	--	--	1.29	0.27
Crushing Emissions	--	--	--	--	4.28	0.79
Maximum Daily Emissions	69.01	96.77	91.01	0.20	25.03	9.88
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

(Urban Crossroads, 2015a, Table 3-11)

Construction Emissions – Localized Significance Thresholds

As previously discussed, 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, 2015a, p. 35) The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology (Methodology) (SCAQMD, 2003).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of a 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. For the nonattainment pollutants PM₁₀ and PM_{2.5}, background ambient concentrations already exceed state and/or federal standards. LSTs for PM₁₀ and PM_{2.5} are therefore based on SCAQMD Rules 403/1303 (construction-source/operational-source

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

emissions respectively) and are established as an allowable change in concentration. Background concentrations are irrelevant. (Urban Crossroads, 2015a, p. 34)

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, 2015a, p. 34) LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects.

LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}. 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, 2015a, p. 35)

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, people with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as "sensitive receptors." The nearest sensitive receptor land uses are the existing residential land uses to the west of the Project site, with the closest sensitive receptor occurring approximately 94 feet (29 meters) from the Project site. (Urban Crossroads, 2015a, p. 35)

Table EA-9, *Maximum Daily Disturbed Acreage*, is used to determine the maximum daily disturbed acreage for use in determining the applicability of the SCAQMD's LST look-up tables. As shown in Table EA-9, the Project could actively disturb approximately 6.5 acres per day during grading activity and thus would exceed the 5 acre per day limit established by the SCAQMD's LST look-up tables. P. (Urban Crossroads, 2015a, p. 38)

Table EA-9 Maximum Daily Disturbed Acreage

Construction Phase	Equipment Type	Equipment Quantity	Acres grader per 8 hour day	Operating Hours per Day	Acres graded per day
Grading	Dozers	3	0.5	8	1.5
	Scrapers	5	1	8	5.0
Total acres graded per day during Grading					6.5

(Urban Crossroads, 2015a, Table 3-15)

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. Applicable localized thresholds are as follows (SCAQMD, 2015):

- California State 1-hour CO standard of 20.0 ppm;
- California State 8-hour CO standard of 9.0 ppm;

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- California State 1-hour NO₂ standard of 0.18 ppm;
- SCAQMD 24-hour construction PM₁₀ LST of 10.4 µg/m³; or
- SCAQMD 24-hour construction PM_{2.5} LST of 10.4 µg/m³.

Without implementation of applicable mitigation measures, emissions during construction activity would exceed SCAQMD's localized significance thresholds for PM₁₀ and PM_{2.5}. Table EA-10, *Localized Significance Summary-Construction (without Mitigation)*, identifies the unmitigated construction emission levels.. (Urban Crossroads, 2015a, p. 38)

Table EA-10 Localized Significance Summary-Construction (without Mitigation)

On-Site Grading, Blasting, Crushing Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Grading Emissions	156.56	100.28	15.89	10.30
Blasting Emissions	—	—	1.29	0.27
Crushing Emissions	—	—	4.28	0.79
Maximum Daily Emissions	156.56	100.28	21.46	11.36
SCAQMD Localized Threshold	275.12	1,673.16	17.32	8.32
Threshold Exceeded?	NO	NO	YES	YES

(Urban Crossroads, 2015a, Table 3-16)

After implementation of Mitigation Measure M-AQ-2, emissions during construction activity would not exceed any of the SCAQMD's localized significance thresholds. Table EA-11, *Localized Significance Summary-Construction (with Mitigation)*, identifies the localized impacts at the nearest receptor location in the vicinity the Project site after implementation of Mitigation Measure M-AQ-2. (Urban Crossroads, 2015a, pp. 38-39)

Table EA-11 Localized Significance Summary-Construction (with Mitigation)

On-Site Grading, Blasting, Crushing Emissions	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Grading Emissions	63.42	63.63	11.66	6.57
Blasting Emissions	—	—	1.29	0.27
Crushing Emissions	—	—	4.28	0.79
Maximum Daily Emissions	63.42	63.63	17.23	7.63
SCAQMD Localized Threshold	275.12	1,673.16	17.32	8.32
Threshold Exceeded?	NO	NO	NO	NO

(Urban Crossroads, 2015a, Table 3-17)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Operational Emissions – Regional Thresholds

Operational activities associated with the proposed Project would result in emissions of ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Operational emissions would be expected from the following primary sources (Urban Crossroads, 2015a, p. 31):

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

Please refer to Section 3.5 of the Project's Air Quality Impact Analysis (IS/MND Appendix C) for a description of the various inputs assumed in the study for each of the above-listed sources. (Urban Crossroads, 2015a, pp. 31-32)

The Project-related operations emissions burdens, along with a comparison of SCAQMD recommended significance thresholds, are shown on Table EA-12, *Summary of Peak Operational Emissions*. Results of the analysis indicate that operation of the Project would not exceed the regional criteria pollutant thresholds established by the SCAQMD, and impacts would therefore be less than significant. It should be noted that the values depicted in Table EA-12 are based on a minimum 10% increase in energy efficiencies beyond 2013 California Building Code Title 24 performance standards, as required by Mitigation Measure M-AQ-1. (Urban Crossroads, 2015a, p. 32)

Table EA-12 Summary of Peak Operational Emissions (With Project Design Features)

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	17.89	0.27	22.78	1.19e-3	0.49	0.48
Energy Source	0.24	2.02	0.86	0.01	0.16	0.16
Mobile	11.31	38.65	128.95	0.28	20.34	5.91
Maximum Daily Emissions	29.43	40.93	152.59	0.29	20.99	6.55
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	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	17.89	0.27	22.78	1.19e-3	0.49	0.48
Energy Source	0.24	2.02	0.86	0.01	0.16	0.16
Mobile	11.74	40.24	129.00	0.27	20.35	5.91
Maximum Daily Emissions	29.87	42.52	152.65	0.28	20.99	6.56
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

(Urban Crossroads, 2015a, Table 3-14)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Operational Emissions – Localized Significance Thresholds

Table EA-13, *Localized Significance Summary – Operations (Without Mitigation)*, shows the calculated emissions for the Project's operational activities compared with the applicable LSTs. The LST analysis includes on-site sources only; however, the CalEEMod™ model outputs do not separate on-site and off-site emissions from mobile sources. In an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table EA-13 represent all on-site Project-related stationary (area) sources, all energy sources, and five percent (5%) of the Project-related mobile sources. Considering that the weighted trip length used in CalEEMod™ for the Project is approximately 16.6 miles, 5% of this total would represent an on-site travel distance for each car and truck of approximately one mile or 5,280 feet; thus, the 5% assumption is conservative and would tend to overstate the actual impact. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs. (Urban Crossroads, 2015a, p. 39) It should be noted that the values depicted in Table EA-13 are based on a minimum 10% increase in energy efficiencies beyond 2013 California Building Code Title 24 performance standards, as required by Mitigation Measure M-AQ-1.

Table EA-13 Localized Significance Summary – Operations (Without Mitigation)

Operational Activity	Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	4.47	30.16	1.69	0.96
SCAQMD Localized Threshold	275.12	1,673.16	4.96	2.16
Threshold Exceeded?	NO	NO	NO	NO

(Urban Crossroads, 2015a, Table 3-12)

The nearest sensitive receptor is located approximately 94 feet (29 meters) west of the Project site within SRA 23. If emissions exceed the LST for a 5-acre site, then dispersion modeling needs to be conducted. Use of the LSTs for a 5-acre site for operational activities is appropriate since this would result in more stringent LSTs because emissions would occur in a more concentrated area and closer to the nearest sensitive receptor than in reality. (Urban Crossroads, 2015a, p. 39)

As shown on Table EA-13, operational emissions would not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Project would have a less-than-significant localized impact during operational activity. (Urban Crossroads, 2015a, p. 40)

Conclusion

Assuming compliance with Mitigation Measure M-AQ-1, and as indicated in the above analysis, no impacts would occur based on the SCAQMD regional thresholds during long-term operation. Additionally, long-term operation of the proposed Project would not exceed the SCAQMD LSTs. Implementation of the proposed Project does, however, have the potential to exceed both the SCAQMD regional thresholds and localized significance thresholds for PM₁₀ and PM_{2.5} during construction activities. Mitigation Measures M-AQ-2 and M-AQ-3 have been imposed on the Project and would reduce the Project's emissions of PM₁₀ and PM_{2.5} during construction to below the SCAQMD regional threshold for these pollutants. Accordingly, and as shown in Table EA-3 through Table EA-8, with implementation of the required mitigation, impacts would be reduced to a level below significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

d) The proposed Project has the potential to expose nearby sensitive receptors to substantial pollutant concentrations during Project construction and long-term operation. Sensitive receptors can include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors. Potential sensitive receptors in the Project vicinity include existing residences that may be located in close proximity to the Project site. Based on an aerial review, the nearest sensitive receptor is an existing residential unit located approximately 94 feet (29 meters) west of the Project site. (Urban Crossroads, 2015a, p. 35)

Construction and Operational LST Analysis

As indicated above under the discussion and analysis of Thresholds 6.b) and 6.c), and as indicated in Table EA-10 and Table EA-11, near-term construction would exceed the SCAQMD's LSTs for PM₁₀ and PM_{2.5}. After implementation of MM AQ-2, the emissions for near-term construction activity would not exceed the SCAQMD thresholds for PM₁₀ and PM_{2.5}. Long-term operational activities associated with the proposed Project would not exceed the SCAQMD LSTs for any criteria pollutant, and would be further reduced with implementation of Mitigation Measures M-AQ-2 and M-AQ-3. Accordingly, impacts to nearby sensitive receptors that could occur during construction of the proposed Project would be less than significant. (Urban Crossroads, 2015a, p. 51)

CO "Hot Spot" Analysis

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Vehicle emissions standards have become increasingly more stringent in the last twenty years. Currently, the CO 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 control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined, as shown based on historical data presented in Table 2-3 of the Project's Air Quality Impact Analysis (IS/MND Appendix C). (Urban Crossroads, 2015a, p. 40)

A CO "hotspot" 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 SCAQMD's 1993 CEQA Air Quality Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO. As identified within 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 congestion at a particular intersection. 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. It can therefore be reasonably concluded that projects (such as the proposed Project) that are not subject to the extremes in vehicle volumes and vehicle congestion that was evidenced in the 2003 Los Angeles hot spot analysis would similarly not create or result in CO hot spots. 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. The proposed Project would not produce the volume of traffic required to generate a CO hotspot either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

threshold considerations (see Table 3-19 of the Project's air quality impact analysis, IS/MND Appendix C). Therefore, CO hotspots 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, 2015a, pp. 40-41)

Conclusion

Based on the analysis presented above, the proposed Project would not expose sensitive receptors which are located within one mile of the Project site to substantial point source emissions, and impacts would be less than significant.

e) Under existing conditions, land uses within one mile of the Project site largely consist of residential homes, undeveloped lands, agricultural uses, rural residential uses, and public facilities (including Metropolitan Water District facilities associated with Lake Mathews). There are no uses within one mile of the Project site that comprise a "substantial point source emitter." In addition, according to LMWAP Figure 3, there are no lands within one mile of the Project site that are designated for Industrial land uses. Accordingly, implementation of the proposed Project would not involve the construction of a sensitive receptor located within one mile of an existing substantial point source emitter, and no impact would occur.

f) 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 (Urban Crossroads, 2015a, p. 44).

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; as such, impacts during construction would be less than significant. Additionally, Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the County's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. (Urban Crossroads, 2015a, p. 44) Therefore, odors associated with the proposed Project's construction and long-term operation would be less than significant and no mitigation is required.

Mitigation:

M-AQ-1 (Condition of Approval 80.Planning.019) Prior to the issuance of building permits, the Project Applicant shall submit energy demand calculations to the County Planning Department demonstrating that the increment of the Project for which building permits are being requested would achieve a minimum 10% increase in energy efficiencies beyond 2013 California Building Code Title 24 performance standards. Representative energy efficiency/energy conservation measures to be incorporated in the Project would include, but would not be not limited to, those listed below (it being understood that the items listed below are not all required and merely present examples; the list is

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

not all-inclusive and other features that would reduce energy consumption and promote energy conservation would also be acceptable):

- Increase in insulation such that heat transfer and thermal bridging is minimized.
- Limit air leakage through the structure and/or within the heating and cooling distribution system.
- Use of energy-efficient space heating and cooling equipment.
- Installation of electrical hook-ups at loading dock areas.
- Installation of dual-paned or other energy efficient windows.
- Use of interior and exterior energy efficient lighting that exceeds the incumbent California Title 24 Energy Efficiency performance standards.
- Installation of automatic devices to turn off lights where they are not needed.
- Application of a paint and surface color palette that emphasizes light and off-white colors that reflect heat away from buildings.
- Design of buildings with "cool roofs" using products certified by the Cool Roof Rating Council, and/or exposed roof surfaces using light and off-white colors.
- Design of buildings to accommodate photo-voltaic solar electricity systems or the installation of photo-voltaic solar electricity systems.
- Installation of ENERGY STAR-qualified energy-efficient appliances, heating and cooling systems, office equipment, and/or lighting products.

M-AQ-2

(Condition of Approval 60.Planning.025) 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. ~~Rule 403 requires implementation of best available dust control measures during construction activities that generate fugitive dust, such as earth moving activities, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the County 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 County of Riverside staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.~~

- During grading activity, all construction equipment (>150 horsepower) shall be California Air Resources Board (CARB) Tier 3 Certified or better. The construction contractor shall keep a log of all construction equipment greater than 150 horsepower demonstrating compliance with this requirement, and the log shall be made available for inspection by Riverside County upon request.
- During construction activity, total horsepower-hours per day for all equipment shall not exceed 24,464 horsepower-hours per day. The construction contractor shall keep a log of all gas-powered equipment used during each day of construction, the number of hours each piece of equipment was used, and the total horsepower of all construction equipment used. These logs shall be made available for inspection by Riverside County upon request.
- During grading and ground-disturbing construction activities, the construction contractor shall ensure that all unpaved roads, active soil stockpiles, and areas undergoing active ground disturbance within the Project site are watered at least three (3) times daily during dry weather. Watering, with complete

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

coverage of disturbed areas by water truck, sprinkler system or other comparable means, shall occur in the mid-morning, afternoon, and after work has been completed for the day.

- Temporary signs shall be installed on the construction site along all unpaved roads and/or unpaved haul routes indicating a maximum speed limit of 15 miles per hour (MPH). The signs shall be installed before construction activities commence and remain in place during the duration of vehicle activities on all unpaved roads unpaved haul routes.

M-AQ-3 (Condition of Approval 60.Planning.026) Prior to issuance of grading permits, the Project Applicant shall identify a location for the importation of soil material. The County shall verify that a note is included on the grading plans indicating that two-way haul trips associated with any soil import activity shall be limited to the following:

- If the haul site location is one mile or less from the Project site, then daily haul trips shall be limited to 923 two-way trips.
- If the haul site location is three miles or less from the Project site, then daily haul trips shall be limited to 513 two-way trips.
- If the haul site location is five miles or less from the Project site, then daily haul trips shall be limited to 350 two-way trips.
- If the haul site location is ten miles or less from the Project site, then daily haul trips shall be limited to 204 two-way trips.
- If the haul site location is 15 miles or less from the Project site, then daily haul trips shall be limited to 138 two-way trips.
- If the haul site location is 20 miles or less from the Project site, then daily haul trips shall be limited to 102 two-way trips.

These notes also shall be specified in bid documents issued to prospective construction contractors. The construction contractor shall keep daily logs of all soil import-related haul trips to and from the Project site, and shall make these logs available to County staff for inspection upon request.

M-AQ-4 (Condition of Approval 10.Planning.023) Prior to issuance of building permits, the Project Applicant shall submit Project design features to the County Planning Department demonstrating that Project design features would satisfy the following:

- Reduce outdoor water use by 30%, consistent with Riverside County Ordinance No. 859.
- Reduce indoor water use by 20% consistent with Division 4.3 of the 2013 CalGreen Residential Mandatory Measures.

Monitoring:

M-AQ-1 Prior to building permit issuance, the County Planning Department shall review the energy demand calculations to verify that the Project achieves a minimum 10% increase in energy efficiencies beyond 2013 California Building Code Title 24 performance standards.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
M-AQ-2	Prior to grading or building permit issuance, the County shall verify that the required notes are included on grading plans. During construction activities, the construction contractor shall be responsible for compliance with the idling restriction. The construction contractor also shall allow for inspection by Riverside County staff or its designee to verify compliance.				
M-AQ-3	Prior to grading permit issuance, the Project Applicant shall identify a location for the importation of material. The Riverside County Planning Department shall verify that the appropriate note(s) are included on the grading plans based on the distance between the Project site and the haul site. During construction activities, the construction contractor shall be responsible for compliance with the two-way trip restriction. The construction contractor also shall allow for inspection by Riverside County staff or its designee to verify compliance.				
M-AQ-4	Prior to building permit issuance, the County Planning Department shall review the Project design features to verify that design features reduce outdoor water use by 30%, consistent with Riverside County Ordinance No. 859 and reduce indoor water use by 20% consistent with Division 4.3 of the 2013 CalGreen Residential Mandatory Measures.				

BIOLOGICAL RESOURCES Would the project

7. Wildlife & Vegetation

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	☐	☒	☐	☐
b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?	☐	☒	☐	☐
c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Wildlife Service?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	☐	☒	☐	☐
f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological	☐	☒	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
interruption, or other means?				
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Source: GIS database (Riverside County, 2014); MSHCP (WRCRCA, 2003); On-site Inspection; *Biological Resources Assessment*, PCR Services Corporation, July 2015; *Results of Focused Burrowing Owl Surveys for the Lake Ranch Project*, PCR Services Corporation, May 21, 2014; *Determination of Biologically Equivalent or Superior Preservation*, PCR Services Corporation, January 2015; *Results of the Special-Status Plant Surveys for the Lake Ranch Off-Site Basin Area*, PCR Services Corporation, July 15, 2015; *Results of the Burrowing Owl Surveys for the Lake Ranch Basin Area*, PCR Services Corporation, June 8, 2015.

Findings of Fact:

a) The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is the applicable habitat conservation/planning program for Western Riverside County. The Project site and off-site areas occur within the Lake Mathews/Woodcrest Area Plan portion of the MSHCP but are not within a Criteria Cell, a designated Cell Group, or a subunit within the Lake Mathews/Woodcrest Area Plan that requires conservation of land for inclusion in the MSHCP Conservation Area. The Project site also is not within any cores or linkages (i.e., Special Linkage Areas) as identified on MSHCP Figure 3-2. (PCR, 2015a, p. 56) As such, the Project would only be required to contribute MSHCP Mitigation Fees pursuant to County Ordinance No. 810 (and as enforced by Mitigation Measure M-BR-6).

Although habitat conservation is not required on the Project site pursuant to the MSHCP, all projects must demonstrate compliance with applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools;" Section 6.1.3, "Protection of Narrow Endemic Plant Species;" Section 6.1.4, "Guidelines Pertaining to the Urban/Wildland Interface;" and Section 6.3.2, "Additional Survey Needs and Procedures."

Project Compliance with MSHCP Section 6.1.2

Riparian/Riverine Areas

Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP provides for the protection of Riparian/Riverine Areas within the MSHCP Plan Area. Riparian/Riverine areas are defined in the MSHCP as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." (PCR, 2015a, p. 56)

The Project site and off-site drainage easement support 2.93 acres of MSHCP Riparian/Riverine Areas associated with Drainages A and B that is equivalent to the CDFW jurisdiction for these drainages. Both of the on-site drainages meet the definition of a Riparian Area because they support habitat dominated by trees and shrubs, mostly consisting of mule fat, black willow, and arroyo willow. The off-site portion of Drainage A (0.01 acre) also meets the definition of a Riverine Area due to the ephemeral flow and limited vegetation that consists of weedy, non-native dominated species typical of ruderal areas. (PCR, 2015a, p. 56) To address impacts to the

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Riparian/Riverine habitat that would be affected by the Project, a Determination of Biologically Equivalent or Superior Preservation (DBESP) Report was prepared and is included as IS/MND Appendix D3. The DBESP Report discusses the unavoidable impacts to riparian/riverine areas and recommends mitigation to replace lost functions and values as it pertains to the MSHCP Covered Species.

According to the DBESP, the Project would result in permanent direct impacts to 1.16 acres of the MSHCP Riparian/Riverine Areas, including 1.15 acres of on-site Riparian Areas in Drainage A and 0.01 acre of off-site Riverine Areas associated with Drainage A (PCR, 2015b, p. 47). The DBESP identified one mitigation measure, included herein as Mitigation Measure M-BR-8, to reduce impacts to the on-site Riparian and off-site Riverine habitats. The mitigation requires the enhancement and creation of 2.58 acres of riparian, riparian transition, and upland areas within both Drainages A and B. Furthermore, within Drainage A, the Project has designated 4.84 acres as a "MSHCP Riparian/Riverine Avoidance/Mitigation Area." With implementation of required mitigation, and in conformance with MSHCP Volume 1, Section 6.1.2, the Project would achieve equivalent or superior preservation as compared to what would occur if the riparian/riverine resources on- and off-site were to be avoided. As such, the Project would result in a less-than-significant impact. (PCR, 2015b, p. 53).

Riparian/Riverine Plant Species

A habitat assessment was conducted for species listed in Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP. The results are presented in Table 4 of the Project's biological resources assessment (IS/MND Appendix D1). The results of the habitat assessment indicate that no Riparian/Riverine plant species are expected to occur within the Project site, the Off-Site Basin, or off site inlet structure due to the lack of suitable habitat, the location of these areas outside of the species range, or based on the negative results of focused surveys conducted for the site in April and July 2014, while surveys of the Off-Site Basin were conducted in March through July, 2015.(PCR, 2015a, pp. 48-49 and 59-61) Accordingly, the Project has no potential to conflict with Section 6.1.2 as it pertains to riparian/riverine plant species.

Riparian/Riverine Wildlife Species

Habitat assessments were conducted for wildlife species listed in MSHCP Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*. Two species have the potential to occur within the Project site, namely the American peregrine falcon and least Bell's vireo, as indicated in Table 5 of the Project's Biological Resources Assessment (see IS/MND Appendix D1). The American peregrine falcon has a very low potential to forage only within the Project site; no suitable breeding habitat (cliffs or tall buildings) occur on-site. This species can be found foraging in nearly any open habitat, but most likely near areas such as lake edges and mountain chains. The nearest of these areas is Lake Mathews approximately 0.30 mile to the south of the Project site. The off-site inlet structure site is limited in size, disturbed and with limited vegetation, and is not suitable for foraging. No Riparian/Riverine habitat occurs within the Off-Site Basin area. (PCR, 2015a, p. 61 and Figure 11)

Despite the presence of willow scrub habitat on the Project site, least Bell's vireo was determined to only have the potential to occur in the northern drainage (Drainage B) and has no potential to occur within the willow scrub habitat in the drainage located in the southern portion (Drainage A) of the Project site based on the extent and composition of the vegetation community. The

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

vegetation in Drainage A is not contiguous as it is broken up by ruderal vegetation and lacks an understory. Moreover, the willow scrub habitat in Drainage A was not considered suitable for nesting least Bell's vireo due to the ambient noise levels (the habitat is adjacent to El Sobrante Road, which is a busy and well-traveled road) and structure of the vegetation. Least Bell's vireos are known to require a dense, stratified canopy for foraging with a typical territory size of between 0.5 and 7.5 acres. In consideration of these factors, this species was considered to have no potential to occur within the willow scrub associated with Drainage A. (PCR, 2015a, pp. 61-62)

Due to the presence of suitable habitat on the Project site, focused surveys for the least Bell's vireo were conducted during which a pair of this species was observed foraging within the on-site portion of Drainage B on two occasions. No nesting least Bell's vireo, or signs of nesting, was observed. Based on observation made during the surveys, the least Bell's vireo appear to only utilize Drainage B on-site for foraging. (PCR, 2015a, pp. 62-63) Because residential lots nearest Drainage B would be set back from the riparian habitat by between 68 feet and 140 feet, there would be no direct impacts to the least Bell's vireo (PCR, 2015a, p. 81). However, the Project has the potential to indirectly impact the least Bell's vireo, and this is evaluated as a significant indirect impact for which mitigation would be required. Implementation of Mitigation Measure M-BR-1 would reduce indirect impacts to least Bell's vireo to below a level of significance. (PCR, 2015a, pp. 89-90)

No other riparian/riverine wildlife species are expected to occur due to the lack of suitable habitat on-site and in the off-site areas. (PCR, 2015a, p. 63) With implementation of the required mitigation, the Project would be consistent with MSHCP Section 6.1.2 as it pertains to riparian/riverine wildlife species.

Vernal Pools

Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the MSHCP provides for the protection of vernal pools within the MSHCP Plan Area. Vernal pools are defined in the MSHCP as "seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season" (PCR, 2015a, p. 56). Vernal pools are not present within the Project site or off-site areas (PCR, 2015a, p. 59). Accordingly, the Project has no potential to conflict with MSHCP Section 6.1.2 as it pertains to vernal pools.

Fairy Shrimp

The Project site and off-site areas do not exhibit aquatic features that could provide suitable habitat for fairy shrimp (i.e., vernal pools, swales, vernal pool-like ephemeral ponds, seasonal ponds, stock ponds, or other human-modified depressions such as tire ruts, etc.) (PCR, 2015a, p. 59). Accordingly, the Project has no potential to conflict with MSHCP Section 6.1.2 as it pertains to fairy shrimp.

Based on the foregoing analysis, and assuming the incorporation of Mitigation Measures M-BR-1 and M-BR-8, the proposed Project would result in less-than-significant impacts to MSHCP riparian/riverine areas, sensitive riparian/riverine plant and animal species, and vernal pools; therefore, the proposed Project would not conflict with MSHCP Section 6.1.2 and impacts would be less than significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Project Compliance with MSHCP Section 6.1.3

Volume I, Section 6.1.3 of the MSHCP requires that within identified Narrow Endemic Plant Species Survey Areas (NEPSSA), site-specific focused surveys for Narrow Endemic Plants Species are required for all public and private projects where appropriate soils and habitat are present. The Project site and off-site areas are not within the Narrow Endemic Plant Species Survey Area; therefore, no surveys were required for Narrow Endemic plant species. As such, the Project has no potential to conflict with MSHCP Section 6.1.3. (PCR, 2015a, p. 63)

Project Compliance with MSHCP Section 6.1.4

Section 6.1.4, *Guidelines Pertaining to the Urban/Wildlands Interface*, of the MSHCP presents a number of guidelines that are intended to address indirect effects associated with locating developments in proximity to a Western Riverside County MSHCP Conservation Area. These guidelines address the quantity and quality of any runoff generated by the development (i.e., drainage and toxics), night lighting, noise, non-native invasive plant species, barriers to humans and animal predators, and grading/land development encroachment. The Project site and off-site areas are not within or in the vicinity of any Criteria Cells and, as such, development of the site is not expected to result in indirect effects to MSHCP Conservation Areas related to night lighting, noise, and grading/land development, and barriers would not be necessary. (PCR, 2015a, p. 64)

Both on-site drainages, Drainage A and Drainage B, ultimately drain to the Santa Ana River where Criteria Cells are located. Runoff from the site therefore has the potential to affect the quantity and quality of water downstream, in addition to the transport of plant seeds. Since the Project would be required to comply with flood and water quality standards, no indirect effects from the quantity and quality of run-off would occur to downstream areas. At minimum, no invasive, non-native plant species listed in Table 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*, would be utilized in the landscape plans (as required pursuant to Mitigation Measure M-BR-7). (PCR, 2015a, p. 64) This would avoid dispersal of invasive plant seeds in the watershed. Although the Project site is not within any Criteria Cells or adjacent to any MSHCP Conservation Areas, it does support the two MSHCP Riparian Areas associated with Drainages A and B. The above measures would avoid indirect impacts to these drainages from runoff and invasive species. Furthermore, measures would be implemented to avoid any indirect impacts to the least Bell's vireo foraging habitat associated with the Riverine Area, Drainage B (refer to Mitigation Measure M-BR-1), including the designation of 3.49 acres within Drainage B as an "MSHCP Riparian/Riverine Avoidance and Mitigation Area". Based on the preceding analysis, and assuming implementation of the required mitigation, the Project would be consistent with MSHCP Section 6.1.4.

Project Compliance with MSHCP Section 6.3.2

MSHCP Section 6.3.2 requires special surveys for certain plant species for lands located within the Criteria Area Plant Species Survey Areas (CAPSSA). MSHCP Section 6.3.2 also identifies lands requiring surveys for certain animal species (burrowing owl, mammals, and amphibians). The Project site and off-site areas occur within the burrowing owl survey area, but do not occur within the amphibian or mammal survey areas, or within the CAPSSA. (PCR, 2015a, p. 63)

Focused burrowing owl surveys were conducted for the Project site, and no burrowing owls were detected. Focused burrowing owl surveys also were conducted for the Off-Site Basin area and no burrowing owls were detected. (PCR, 2015c, p. 4) However, there is a potential that the Project site and Off-Site Basin area could be occupied by burrowing owl individuals prior to the

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

commencement of grading or ground disturbing activities. If present, impacts to the burrowing owl would represent a significant impact due to a conflict with the MSHCP and mitigation would be required in the form of pre-construction surveys. This is evaluated as a potentially significant impact for which mitigation would be required. Implementation of Mitigation Measure M-BR-2, which enforces the requirement to conduct pre-construction burrowing owl surveys, would reduce potential impacts to the burrowing owl to a level below significant. (PCR, 2015a, pp. 81-82)

Based on the analysis provided above, and with the incorporation of mitigation, the proposed Project would not conflict with MSHCP Section 6.3.2.

As indicated in the above analysis, and assuming the incorporation of mitigation measures, the proposed Project would be consistent with, or otherwise would not conflict with, all applicable provisions of the MSHCP. Accordingly, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan, and impacts would be less than significant with the incorporation of mitigation measures.

b & c) Implementation of the proposed Project has the potential to directly or indirectly impact endangered or threatened plant and animal species, if such species occur within areas planned for impact by the Project. Each is discussed below.

Impacts to Sensitive Plant Species

Development of the Project would result in the direct removal of numerous common plant species. A list of plant species observed within the Project site and off-site improvement areas is included in Appendix A to the Project's Biological Resources Assessment (IS/MND Appendix D1). Common plant species present within the Project site occur in large numbers throughout the region and their removal would not be considered a substantial adverse effect on sensitive plant species. Therefore, impacts to common plant species would be less than significant and no mitigation measures would be required. (PCR, 2015a, p. 69)

A total of 34 sensitive plant species are identified as occurring in the Project vicinity in available databases. Of these, 20 sensitive plant species are not expected to occur within the Project site of the off-site areas due to the lack of suitable habitat or because the site is outside the known distribution or elevation range for the species. These species are listed in Appendix C to the Project's Biological Resources Assessment (IS/MND Appendix D1). The remaining 14 sensitive plant species were determined to have a potential to occur on-site and, as such, focused sensitive plant surveys were conducted in April and July 2015 by PCR to determine the presence/absence of these sensitive species. No sensitive plant species were found to occur on-site. Focused special-status plant surveys were conducted by the Project biologists (PCR) on April 21, 2015 and July 13, 2015 on the Off-Site Basin area to determine the presence or absence of 15 special-status plants species having the potential to occur within the Off-Site Basin area (PCR, 2015d). These species are listed in Appendix A of the Project's Special Status Plants Survey (refer to MND Appendix D5). Results of the focused surveys conducted within the Off-Site Basin area did not identify any special-status plants species (PCR, 2015d, p. 4).

Therefore, no impacts to sensitive plant species would occur as a result of Project development and no mitigation measures would be required. (PCR, 2015a, p. 69)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Impacts to Sensitive Animal Species

Development of the Project site and off-site areas would result in the disruption and removal of habitat and the loss and displacement of non-sensitive common wildlife species. A list of wildlife species observed within the Project site is included in Appendix A to the Project's Biological Resources Assessment (IS/MND Appendix D1). Due to the limited amount of native habitat to be removed and the level of existing disturbance from human activity within the vicinity (e.g., nearby development), these impacts would not be expected to reduce the general wildlife populations below self-sustaining levels within the region and impacts. Therefore, impacts to common wildlife species would be less than significant and no mitigation measures are required. (PCR, 2015a, p. 69)

A total of 43 species are identified as occurring in the Project vicinity in available databases. Of these, 25 sensitive wildlife species are not expected to occur within the Project site or off-site areas due to the lack of suitable habitat or because the site is outside the known distribution range for the species. These species are listed in Appendix D to the Project's Biological Resources Assessment (see IS/MND Appendix D1). Since these species are not expected to be present on the Project site or off-site areas, no impacts would occur as a result of Project development and no mitigation measures are required. (PCR, 2015a, p. 70)

The remaining 17 sensitive wildlife species were determined to have a potential to occur on-site and also off-site for a few species. Of these species one, the least Bell's vireo, was observed on-site and is discussed in further detail below. Other sensitive wildlife species with potential to occur on-site and/or off-site include western spade foot toad, coast horned lizard, orangethroat whiptail, northern harrier, white-tailed kite, burrowing owl (with the potential to also occur within the Off-Site Basin area), long-eared owl, loggerhead shrike, yellow warbler, yellow breasted chat, tricolored blackbird, Stephan's kangaroo rat, San Diego, San Diego desert woodrat, southern grasshopper mouse, American badger, western mastiff bat, and pocketed free-tailed bat. The Project site and off-site areas also have the potential to support migratory birds and raptors that are discussed further below. (PCR, 2015a, p. 70)

Ten of the 17 species are covered by the MSHCP with no survey requirements, including western spade foot, coast horned lizard, orangethroat whiptail, northern harrier, white-tailed kite, loggerhead shrike, yellow warbler, yellow breasted chat, Stephan's kangaroo rat, and San Diego blacktailed jackrabbit. Therefore, assuming payment of the MSHCP Local Development Mitigation Fee (as required by Mitigation Measure M-BR-6), no additional mitigation is required for these species. Least Bell's vireo and burrowing owl are conditionally covered by the MSHCP with additional surveys and mitigation required, as discussed in further detail below. (PCR, 2015a, p. 70)

The remaining five species, the western mastiff bat, long-eared owl, southern grasshopper mouse, San Diego desert woodrat, and American badger, are not covered by the MSHCP. These species are listed as species of special concern by the CDFW and do not carry a federal or state listing as threatened or endangered. These species are considered to have a low to very low potential to occur on the Project site based on the limited habitat and/or quality of the habitat, and impacts to these species would be less than significant as follows: (PCR, 2015a, pp. 70-71)

- **Western Mastiff Bat:** Impacts to western mastiff bat foraging habitat would be less than significant due to the limited, isolated open scrub areas and disturbed nature of the Project site from agricultural and ongoing maintenance activities that would not be expected to

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

support a large food source for foraging. As such, any impacts to foraging habitat for this species, if present, would be less than significant and no mitigation measures are required. (PCR, 2015a, p. 70)

- **Long-Eared Owl**: Impacts to long-eared owl would be less than significant due to the low suitability of the riparian habitat on the Project site. In addition, a large proportion of riparian habitat would be avoided on the project site and mitigation is proposed as compensation for impacted habitat (refer to Mitigation Measure M-BR-3). Measures to avoid impacts to migratory birds would also be expected to avoid impacts to this species, if present (see Mitigation Measure M-BR-5). (PCR, 2015a, p. 71)
- **Southern Grasshopper Mouse, San Diego Desert Woodrat, and American Badger**: Impacts to southern grasshopper mouse, San Diego desert woodrat, and American badger would be less than significant based on the limited and isolated nature of the habitat within the Project's boundaries and disturbance on the Project site from agricultural and ongoing maintenance activities that would not be expected to support large populations of these species, if present. Furthermore, no records of southern grasshopper mouse and American badger occur within 10 and 20 miles of the Project site, respectively, since 1908. Potentially suitable habitat adjacent to Drainage B would be avoided as part of the project. (PCR, 2015a, p. 71)

The above five species were not considered for coverage under the MSHCP, indicating that regionally significant populations of these species do not exist within the MSHCP boundaries. Based on the above discussion, the Project site is not capable of supporting large populations of these species and a loss of a few individuals, if present, would not expect to reduce regional population numbers. Therefore, any impacts to these species would be less than significant and no mitigation measures would be required. (PCR, 2015a, p. 71)

Impacts to the following sensitive wildlife species would be considered potentially significant prior to mitigation, as follows:

- **Least Bell's Vireo**. One sensitive wildlife species, the least Bell's Vireo (Federally Endangered, State Endangered), was observed foraging on-site in Drainage B during two surveys; no nesting birds were observed or are expected based on observations made during the surveys. Drainage B would be avoided as part of the Project including a setback of between 68 feet and 140 feet that is proposed as open space between the drainage and the development. As such, no direct impacts to least Bell's vireo birds or their nests would occur. There is a potential for indirect noise impacts if construction occurs during the breeding season and post-construction from human influences (breeding season starts April 10, depending on their arrival from wintering areas, and continues until they leave around July 31). This is considered a potentially significant indirect impact of the proposed Project requiring mitigation, in the form of avoidance and minimization measures (refer to Mitigation Measure M-BR-1). With implementation of the required mitigation, indirect impacts to this species would be reduced to below a level of significance. (PCR, 2015a, p. 71)
- **Burrowing Owl**. The Project site and off-site areas support potentially suitable burrowing owl (Species of Special Concern) habitat, but no burrowing owl burrows, signs, or individuals were found on-site during the Step I and Step II surveys conducted by PCR.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Although the Project site does not currently support burrowing owls, a pre-construction survey would be required in compliance with the MSHCP. Specifically, in accordance with the County requirements, a pre-construction survey for burrowing owl would be required within 30 days prior to ground disturbance to avoid potential direct take of burrowing owls in the future. Accordingly, impacts to the burrowing owl are considered potentially significant requiring pre-construction surveys and additional avoidance measures as mitigation to avoid impacts to this species (refer to Mitigation Measure M-BR-2). With implementation of the required mitigation, impacts to the burrowing owl would be reduced to less-than-significant levels. (PCR, 2015a, p. 72)

- **Impacts to Nesting Birds:** In addition to the above-listed wildlife species, the Project site and off-site areas support potential nesting and foraging habitat for migratory birds, in addition to potential foraging habitat for raptors. Based on the disturbed nature of the site from agriculture and ongoing maintenance activities, the quality of foraging habitat is considered to be low. Higher quality foraging habitat is considered to occur associated with Lake Mathews to the south of the Project site. The loss of foraging habitat as a result of the Project would not be expected to impact the foraging of these species. Therefore, impacts to foraging habitat would be considered less than significant and no mitigation measures would be required. (PCR, 2015a, p. 80)

However, the Project site and off-site areas have the potential to support songbird and raptor nests due to the presence of shrubs, ground cover, and limited trees. Nesting activity typically occurs from February 15 to August 31. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA, 16 U.S.C. 703 et seq.). In addition, nests and eggs are protected under Fish and Wildlife Code Section 3503. As such direct impacts to breeding birds (e.g. through nest removal) or indirect impacts (e.g. by noise causing abandonment of the nest) is considered a potentially significant impact for which mitigation, in the form of construction timing restrictions and/or avoidance, would be required (refer to Mitigation Measure M-BR-5). Implementation of the required mitigation would reduce impacts to nesting birds to a level below significance. (PCR, 2015a, p. 80)

d) The Project site and off-site areas support potential live-in and movement habitat for species on a local scale (i.e., some limited live-in and at least marginal movement habitat for reptile, bird, and mammal species), but it likely provides little to no function to facilitate wildlife movement for wildlife species on a regional scale, and is not identified as a regionally important dispersal or seasonal migration corridor (PCR, 2015a, pp. 79-80). Movement on a local scale likely occurs with species adapted to urban environments due to the development and disturbances in the vicinity of the Project site and off-site areas. Although implementation of the Project would result in disturbances to local wildlife movement within the Project site and off-site areas, those species adapted to urban areas would be expected to persist on-site following construction, particularly within the open space areas. The Project also would avoid the entirety of Drainage B and a portion of Drainage A through designation of 8.33 acres of land within the drainages as "MSHCP Riparian/Riverine Avoidance/Mitigation Areas", which would allow the continuation of any local scale wildlife movement that may currently occur (PCR, 2015a, pp. 79-80). Additionally, as discussed and analyzed under Threshold 7.b & c), the Project would be required to comply with all of the provisions of the MSHCP, including payment of the MSHCP Local Development Mitigation Fee and compliance with MSHCP Section 6.1.2 pertaining to Riparian/Riverine Areas; thus, the potential impacts to movement on a local scale would be reduced to less-than-significant levels (refer to Mitigation Measures M-BR-1

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

through M-BR-8). In addition, the MSCHP does not identify any existing or proposed linkages or constrained linkages within the vicinity of the Project site or off-site impact areas (WRCRCA, 2003, Figure 3-2). Therefore, assuming implementation of the required mitigation, impacts associated with the movement of wildlife species would be less than significant.

e) Figure EA-5, *Impacts to Plant Communities*, depicts the Project's anticipated impacts to all on-site plant communities, including riparian habitats, while Figure EA-6, *Impacts to Sensitive Plant Communities*, depicts the Project's impacts to sensitive plant communities. The Project's impacts to sensitive plant communities and riparian habitat are discussed below.

Impacts to Sensitive Plant Communities

The Project site supports eight native plant communities totaling 4.40 acres, including arroyo willow scrub (0.97 acre), brittle bush scrub (1.06 acres), black willow scrub (1 acre), black willow scrub/disturbed (0.32 acre), California sagebrush scrub (0.02 acre), fourwing saltbush scrub (0.14 acre), mule fat scrub (0.76 acre), and pinebush scrub (0.13 acre). The remainder of the Project site supports non-native communities including agriculture, developed, disturbed, disturbed/brittlebush scrub, disturbed/California sagebrush scrub-California buckwheat scrub, disturbed/mule fat scrub, disturbed/willow herb, pond, and ruderal areas. Three of the plant communities on-site are considered sensitive pursuant to CDFW, namely arroyo willow scrub, black willow scrub, and black willow scrub/disturbed. A total of 0.57 acre of sensitive native communities would be impacted by the proposed Project (25 percent of the total 2.29 acres of sensitive communities on-site). These impacts include 0.48 acre of arroyo willow scrub (49.5 percent of the total 0.97 acre on-site) and 0.09 acre of black willow scrub (9 percent of the total one acre on-site). No impacts are proposed to the black willow scrub/disturbed community totaling 0.32 acre of avoidance. Acreages of impacts are summarized in Table EA-14, *Existing and Permanent Impacts to Plant Communities*. Following impacts, a total of 1.72 acres of sensitive communities would be avoided (75 percent of the total 2.29 acres of sensitive communities on-site), including 0.49 acre of arroyo willow scrub, 0.91 acre of black willow scrub, and 0.32 of black willow scrub/disturbed. (PCR, 2015a, p. 72)

The Off-Site Basin area consists primarily of large ruderal areas (PCR, 2015d, p. 3). Specifically, the Off-Site Basin area contains three (3) non-native vegetation communities as mapped by the Project biologist (PCR) as Disturbed/Coyote Brush Scrub, Ruderal, and Disturbed. (PCR, 2015d, pp. 3-4)

The riparian plant communities that would be impacted by the Project (arroyo willow scrub and black willow scrub) are associated with Drainage A in the southern portion of the site and are not considered high quality due to the disturbed/non-contiguous composition and the lack of a native understory. These riparian communities do not support or have the potential to support any protected plant or animal species. As a result, impacts to the arroyo willow scrub and black willow scrub communities would not threaten the existence of high quality stands of this vegetation community. Nevertheless impacts to these vegetation communities would be considered potentially significant since they are identified as sensitive plant communities by CDFW, and are also CDFW, USACE, and RWQCB jurisdictional and are considered MSHCP Riparian/Riverine areas. Mitigation would be required through compensatory mitigation at a 2:1 ratio through creation, restoration, and/or enhancement of riparian habitat on- and off-site (refer to Mitigation Measures M-BR-3 and M-BR-8). The higher quality riparian vegetation associated with Drainage B in the northeastern portion of the site that supports foraging habitat for least Bell's vireo would be avoided by the Project through designation as a "MSHCP Riparian/Riverine Avoidance and Mitigation Area". With implementation of the required mitigation, impacts to sensitive plant communities would be reduced to less-than-significant levels. (PCR, 2015a, p. 72 and p. 75)



Figure EA-4





Figure EA-5



IMPACTS TO SENSITIVE PLANT COMMUNITIES

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Table EA-14 Existing and Permanent Impacts to Plant Communities

Plant Community	Existing (acres)		Impacts (acres)	
	Project Site	Off-Site	Project Site	Off-Site
California Sagebrush Scrub	0.02	-	-	-
Brittle Bush Scrub	1.06	-	0.96	-
Arroyo Willow Scrub	0.97	-	0.48	-
Black Willow Scrub	1.00	-	0.09	-
Mule Fat Scrub	0.76	-	0.66	-
Pinebush Scrub	0.13	-	0.02	-
Fourwing Saltbush Scrub	0.14	-	-	-
Black Willow Scrub/Disturbed	0.32	-	-	-
Disturbed/Brittle Bush Scrub	0.34	-	0.34	-
Disturbed/Mule Fat Scrub	0.51	-	0.50	-
Disturbed/California Sagebrush-California Buckwheat Scrub	1.86	-	1.80	-
Disturbed/Willow Herb	0.01	-	0.01	-
Agriculture	34.49	-	34.22	-
Pond	1.58	-	1.58	-
Ruderal	5.78	29.70	4.39	7.72
Ruderal/Coyote Bush Scrub	-	0.03	-	-
Disturbed	50.31	0.52	49.47	0.02
Developed	4.34	-	4.34	-
Total	103.62	30.25	98.86	7.74

(PCR, 2015a, Table 6)

Impacts to CDFW Jurisdictional Areas

The Project site and off-site drainage easement supports drainages that are considered jurisdictional streambeds pursuant to Section 1602 of the California Fish and Game Code, as regulated by CDFW. This includes Drainage A and Drainage B, of which impacts are only proposed to Drainage A totaling 1.15 acres on-site (39.4percent of the total 2.92 acres of CDFW jurisdiction on-site within Drainages A and B), and 0.01 acre off-site, as shown in Figure EA-7, *Impacts to Jurisdictional Features*. Existing and impact acreages are summarized in Table EA-15, *Existing and Permanent Impacts to CDFW Jurisdictional Features*. A total of 1.77 acres of CDFW jurisdiction would be avoided by the Project (60.6 percent of the total 2.92 acres of CDFW jurisdiction on-site within Drainages A and B). Impacts to CDFW jurisdictional drainages therefore total 1.16 acres. (PCR, 2015a, p. 75 - p. 76)

Impacts to CDFW jurisdictional features are evaluated as a potentially significant impact of the proposed Project, requiring a permit from the CDFW and compensatory mitigation in conformance with Section 1602 of the California Fish and Game Code (refer to Mitigation Measure M-BR-4). Compliance with Section 1602 of the California Fish and Game Code would reduce impacts to a less-than-significant level. (PCR, 2015a, p. 76)

The pumping of water into the isolated man-made pond and use of the water for irrigation was terminated in July 2014 and the pond has since dried out (PCR, 2015a, p. 17). As such, the pond no longer exists and no longer supports jurisdictional indicators. Accordingly, impacts to the former pond would be less than significant requiring no mitigation. (PCR, 2015a, p. 27)



Source(s): PCR (02-15)

Figure EA-6



NOT TO SCALE



IMPACTS TO JURISDICTIONAL FEATURES

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Table EA-15 Existing and Permanent Impacts to CDFW Jurisdictional Features

Feature	Existing (acres)	Impacts (acres)
Drainage A (On-site)	2.65	1.15
Drainage A (Off-site)	0.01	0.01
Subtotal	2.66	1.16
Drainage B	0.27	-
Total	2.93	1.16

(PCR, 2015a, Table 7)

f) Drainage B supports USACE/RWQCB federally protected wetlands and Drainage A supports USACE/RWQCB non-wetland jurisdiction, both of which are regulated under Sections 404/401 of the Clean Water Act (CWA). Impacts are proposed to 0.06 acre of USACE/RWQCB non-wetland jurisdiction in Drainage A only (30 percent of the total USACE/RWQCB jurisdiction on-site in Drainages A and B' off-site acreages are negligible), as shown on Figure EA-7. Existing and impact acreages are summarized in Table EA-16, *Existing and Permanent Impacts to USACE/RWQCB Jurisdictional Drainages*. A total of 0.14 acre of on-site wetland and non-wetland USACE/RWQCB jurisdiction would be avoided by the project (60 percent of the total 0.20 acre of USACE/RWQCB jurisdiction on-site within Drainages A and B, including all of the 0.06-acre of wetlands in Drainage B). Impacts to USACE/RWQCB jurisdictional drainages total 0.06 acre; thus, impacts to jurisdictional areas regulated by the USACE and/or RWQCB represent significant impacts of the Project requiring mitigation. (PCR, 2015a, p. 76 and p. 79)

Table EA-16 Existing and Permanent Impacts to USACE/RWQCB Jurisdictional Drainages

Feature	Length (ft)	Area (acres) ^a		Flow
		Existing	USACE/RWQCB Impacts ^c	
Drainage A (On-Site, non-wetland)	1,968	0.14	0.06	Ephemeral
Drainage A (Off-Site, non-wetland)	70	0.00 ^b	0.00 ^b	Ephemeral
Drainage B (wetland)	241	0.06	-	Perennial
Total	2,279	0.20	0.06	

^a Jurisdictional acreages overlap and are not additive (e.g. USACE/RWQCB acreages are included in the total CDFW jurisdictional acreages provided in Table EA-15).

^b The acreages are negligible with 0.000422 acre of existing and 0.000422 acres of impacts.

^c Impacts to linear feet include 920 feet within the on-site portion of Drainage A and 60 feet within the off-site portion of Drainage A, for a total of 980 linear feet. (PCR, 2015a, Table 8)

Impacts to USACE and/or RWQCB jurisdictional features would be required to comply with Sections 404 and 401 of the CWA, respectively, including applying for a permit and mitigation subject to approval by USACE and/or RWQCB. Compensatory mitigation comprising creation, enhancement, and/or restoration of jurisdictional habitat would be required pursuant to Sections 404 and 401 of the CWA (refer to Mitigation Measure M-BR-4). The compensatory mitigation also would be subject to approval by the USACE and RWQCB. Implementation of the required mitigation would reduce impacts to a less-than-significant level. (PCR, 2015a, p. 79)

The pumping of water into the isolated man-made pond and use of the water for irrigation was terminated in July 2014. As such the pond is anticipated to dry out and may not exist and/or may

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

cease to support jurisdictional field indicators at the time of regulatory permitting. If at the time of regulatory permitting it is determined the pond no longer exists and/or does not support jurisdictional indicators, and pursuant to Sections 404 and 401 of the CWA and USACE and RWQCB requirements, the compensatory mitigation would not be required for impacts to the man-made pond. (PCR, 2015a, p. 79)

g) Aside from the MSHCP (which is addressed above under Threshold 7.a), the County of Riverside also has tree ordinances and codes in place that require permits prior to removing or severely trimming any trees planted in the right of way of any County highway (Ordinance No. 499); prior to removing any living native tree on any parcel or property greater than one-half acre in size and above 5,000 feet in elevation (Ordinance No. 559.7); or prior to removing certain native desert species (Food and Agricultural Code Section 80071-80075). An oak tree management guidelines report has also been prepared by the County of Riverside and was approved by the Board of Supervisors on March 2, 1993. (PCR, 2015a, p. 48)

Under existing conditions, there are no trees located within the rights-of-way of any County highway; as such, the Project has no potential to conflict with Ordinance No. 499. Additionally, the Project site does not occur at elevations above 5,000 feet above mean seal level (amsl); accordingly, the Project has no potential to conflict with Ordinance No. 559.7. The Project site also does not contain any native desert species; thus, there would be no potential to conflict with Food and Agricultural Code Section 80071-80075.

The Riverside County Oak Tree Management Guidelines requires surveys of individual trees and the minimization and/or avoidance of oak trees, where feasible. Based on the results of the site-specific Biological Resources Assessment (see IS/MND Appendix D1), the Project site and off-site impact areas do not contain any oak trees or oak woodland habitat.

Accordingly, and based on the foregoing analysis, the proposed Project has no potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and no impact would occur. (PCR, 2015a, p. 81)

Mitigation:

M-BR-1 (Condition of Approval 60.EPD.007, 80.EPD.001, 50.EPD.004) Due to the presence of least Bell's vireo in the avoided drainage located in the northeastern portions of the Project site (Drainage B), the following avoidance and minimization measures shall be adopted to avoid impacts to the species during construction and following completion of construction during the breeding season (approximately April 10 until July 31, depending on when the birds arrive from and depart to wintering areas):

Mitigation Prior to and During Construction

- A. Prior to the issuance of grading or building permits during the breeding season, a survey to determine the presence of potential nesting least Bell's vireo on-site shall be conducted by a qualified biologist three (3) days before any grading or ground disturbance activity commences in the vicinity of Drainage B during the breeding season, and all results shall be forwarded to the USFWS, CDFW, and the Riverside County Environmental Programs Department.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- B. The qualified biologist shall identify a 300-foot avoidance buffer from the habitat in Drainage B for construction occurring during the breeding season. If work is required within 300-feet during the breeding season, the biologist shall monitor all work to ensure no impacts occur to the least Bell's vireo. Written documentation shall be prepared and submitted to CDFW, USFWS, and Riverside County Environmental Programs Department on completion of construction during the breeding season to outline any monitoring activities.
- C. Construction limits in and around least Bell's vireo habitat associated with Drainage B shall be delineated with flags and/or fencing prior to the initiation of any grading or construction activities to clearly identify the limits of the habitat and/or the 300-foot avoidance buffer during the breeding season.
- D. Prior to grading and construction, a training program shall be developed and implemented by the qualified biologist to inform all workers on the project about the listed species, its habitat, and the importance of complying with avoidance and minimization measures. A copy of the training materials shall be included in bid documents issued to prospective construction contractors.
- E. Prior to the issuance of grading or building permits, the County of Riverside Building and Safety Department shall ensure the following note is included on the grading and/or building plans: "All construction work shall occur during daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels to between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May." This note also shall be specified in bid documents issued to prospective construction contractors.
- F. During any excavation and grading within or immediately adjacent to the 300-foot avoidance buffer for Drainage B, the construction contractors shall install properly operating and maintained mufflers on all construction equipment, fixed or mobile, to reduce construction equipment noise to the maximum extent possible. The mufflers shall be installed consistent with manufacturers' standards. The construction contractor shall also place all stationary construction equipment so that emitted noise is directed away from the least Bell's vireo habitat within Drainage B. The construction contractor shall keep logs demonstrating that all construction equipment utilizes properly maintained mufflers, and shall make these logs available to County staff for inspection upon request.
- G. The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and Drainage B during all Project construction occurring during the breeding season. To ensure this requirement is enforced, the construction contractor shall provide a map to the Riverside County Environmental Programs Department depicting the location of staging areas in relation to Drainage B. The construction contractor also shall permit inspection by Riverside County staff upon request to verify compliance with this requirement.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- H. If the monitoring biologist determines that noise from the construction activities may be affecting the normal expected breeding behavior of the birds, the construction supervisor shall be informed and work within no less than 300 feet of construction areas shall be ceased until appropriate measures are implemented. This may include monitoring by a qualified acoustician to verify noise levels are below 60 decibels (dBA) within the least Bell's vireo habitat. If the 60 dBA requirement is exceeded the acoustician shall make operational changes, utilize technology to reduce construction noise such as mufflers, and/or install a barrier to alleviate noise levels during the breeding season. Installation of noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be communicated to the USFWS, CDFW, and Riverside County Environmental Programs Department.
- I. If after all corrective actions are implemented the monitoring biologists determines that the normal expected breeding behavior of the birds is being affected, work within no less than 300 feet shall be ceased and the USFWS, CDFW, and Riverside County Environmental Programs Department shall be contacted to discuss the appropriate course of action.

Mitigation for Post-Construction Impacts

- J. Prior to building permit final inspection, the Project Applicant shall demonstrate that cat-proof fencing has been installed at the perimeter of development adjacent to the open space for Drainage B.
- K. Access to the Drainage B open space area shall be restricted to conservation activities only. Prior to building permit final inspection, signs shall be installed prohibiting public access, including dogs.
- L. Prior to building permit final inspection, the Riverside County Building and Safety Department shall ensure that all night lighting within development areas are directed away from the open space area associated with Drainage B (Lot 'M'). The Riverside County Building and Safety Department shall also verify that Project has been designed to minimize exterior night lighting while remaining compliant with local ordinances related to street lighting. Any necessary lighting (e.g., to light up equipment for security measures) shall be shielded or directed away from the habitat area in Drainage B and are not to exceed 0.5 foot-candles. Monitoring by a qualified lighting engineer (attained by the Project Applicant and subject to spot checking by Riverside County staff) shall be conducted as needed to verify light levels are below 0.5 foot-candles required within identified occupied least Bell's vireo habitat following construction. If the 0.5 foot-candles requirement is exceeded, the lighting engineer shall make operational changes and/or install a barrier to alleviate light levels during the breeding season.
- M. An awareness program shall be implemented to educate residents about the conservation values associated with the Drainage B open space. A copy of the awareness program shall be provided to the Riverside County Environmental Programs Department for review and approval. The approved awareness

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

program literature shall be included in sales documentation for individual units and provided to each homeowner within the proposed development.

M-BR-2

(Condition of Approval 60.EPD.004) Pursuant to Objective 6 and Objective 7 of the Species Account for the Burrowing Owl included in the Western Riverside County Multiple Species Habitat Conservation Plan, within 30 days prior to initial grading or clearing activities, a qualified biologist shall conduct a survey of the Project site and off-site area and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report that shall be reviewed and approved by the County of Riverside prior to the issuance of a grading permit, subject to the following provisions:

- a) In the event that the pre-construction survey identifies no burrowing owls on the property or within the off-site area, a grading permit may be issued without restriction.
- b) In the event that the pre-construction survey identifies the presence of at least one individual but less than three (3) mating pairs of burrowing owl, then grading permits shall be conditioned to avoid occupied burrows to the greatest extent feasible, following the guidelines in the Staff Report on Burrowing Owl Mitigation published by Department of Fish and Wildlife (March 7, 2012) including, but not limited to, conducting pre-construction surveys; avoiding occupied burrows during the nesting and non-breeding seasons; implementing a worker awareness program; biological monitoring; establishing avoidance buffers; and flagging burrows for avoidance with visible markers. If occupied burrows cannot be avoided, acceptable methods may be used to exclude burrowing owl either temporarily or permanently, pursuant to a Burrowing Owl Exclusion Plan that shall be prepared and approved by the County of Riverside Environmental Programs Department (EPD), in coordination with the CDFW. The Burrowing Owl Exclusion Plan shall be prepared in accordance with the guidelines in the Staff Report on Burrowing Owl Mitigation and the MSHCP. In accordance with the MSHCP, take of active nests shall be avoided. Passive relocation (i.e., the scoping of the burrows by a burrowing owl biologist and collapsing burrows free of young) shall occur when owls are present outside the nesting season. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. The EPD may require translocation sites for the burrowing owl to be created in the MSHCP reserve for the establishment of new colonies pursuant to MSHCP objectives for the species. Translocation sites, if required, shall be identified in consultation with EPD and/or CDFW taking into consideration unoccupied habitat areas, presence of burrowing mammals, existing colonies, and effects to other MSHCP Covered Species. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.
- c) In the event that the pre-construction survey identifies the presence of three (3) or more mating pairs of burrowing owl, the requirements of MSCHP Species-Specific Conservation Objectives 5 for the burrowing owl shall be followed.

Objective 5 states that if the site (including adjacent areas and the off-site area) supports three (3) or more pairs of burrowing owls and supports greater than 35 acres of suitable Habitat, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite until it is demonstrated that Objectives 1-4 have been met. A grading permit shall only be issued, either:

- Upon approval and implementation of a property-specific Determination of Biologically Superior Preservation (DBESP) report for the burrowing owl by the CDFW; or
- A determination by the biologist that the Project site and off-site area is part of an area supporting less than 35 acres of suitable Habitat, and upon passive or active relocation of the species following CDFW protocols. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.

M-BR-3

(Condition of Approval 60.EPD.006) Prior to the issuance of a grading permit, a habitat mitigation and monitoring plan (HMMP) for impacts to two sensitive native communities (arroyo willow scrub and black willow scrub) shall be prepared. The HMMP shall offset impacts to these habitats by focusing on the creation, enhancement, and/or restoration of riparian habitats within disturbed habitat areas of the Project site and/or off-site. The functions and values of the mitigation areas shall be equivalent or superior to the impacted habitat. The HMMP shall provide details as to the implementation of the mitigation, performance standards, maintenance, and future monitoring. Prior to grading permit final inspection, compensatory mitigation for impacts to the three sensitive native communities shall be provided at a 2:1 ratio for impacts to arroyo willow scrub and black willow scrub by creating, enhancing and/or restoring riparian habitat. Mitigation is proposed both on-site and off-site at an agency approved mitigation bank or land acquired for the purpose of mitigation. The riparian mitigation shall also satisfy compensatory mitigation required pursuant to regulatory permits (as required by Mitigation Measure M-BR-4) and Section 6.1.2 of the MSHCP (as required by Mitigation Measure M-BR-8). Mitigation for impacts shall occur in one or more of the following ways:

1. Transplantation of arroyo willow scrub and black willow scrub habitat species from impact areas, if feasible;
2. Seeding of arroyo willow scrub and black willow scrub species, in addition to species associated with these habitat types;

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

3. Planting of container plants and/or stakes of arroyo willow and black willow species and/or other species associated with these habitat types; or
4. Salvage of duff and topsoil from impact areas and subsequent dispersal into the mitigation areas.

M-BR-4

(Condition of Approval 60.EPD.006) Prior to the issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features, the Project applicant shall obtain regulatory permits from the USACE, RWQCB, and CDFW. The following shall be incorporated into the permitting, subject to approval by the regulatory agencies:

1. On-site and off-site creation, enhancement, and/or restoration of USACE/RWQCB jurisdictional "waters of the U.S."/"waters of the State" within the Santa Ana Watershed at a ratio no less than 1:1 or within an adjacent watershed at a ratio no less than 2:1 for permanent impacts, and for any temporary impacts to restore the impact area to pre-Project conditions (i.e., pre-Project contours and revegetate where applicable). Off-site mitigation may occur on land acquired for the purpose of in-perpetuity preservation, or through the purchase of mitigation credits at an agency-approved off-site mitigation bank.
2. Off-site replacement and/or restoration of CDFW jurisdictional streambed and associated riparian habitat within the Santa Ana Watershed at a ratio no less than 2:1 or within an adjacent watershed at a ratio no less than 3:1 for permanent impacts, and for any temporary impacts to restore the impact area to pre-Project conditions (i.e., pre-Project contours and revegetate where applicable). Off-site mitigation may occur on land acquired for the purpose of in-perpetuity preservation, or through the purchase of mitigation credits at an agency-approved off-site mitigation bank.

Purchase of mitigation credits through an agency-approved mitigation bank or in-lieu fee program shall occur prior to any impacts to jurisdictional drainages. Mitigation proposed on land acquired for the purpose of in-perpetuity mitigation that is not part of an agency-approved mitigation bank or in-lieu fee program shall include the preservation, creation, restoration, and/or enhancement of similar habitat pursuant to a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP shall be prepared prior to any impacts to jurisdictional features, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the mitigation shall be to preserve, create, restore, and/or enhance similar habitat with equal or greater function and value than the impacted habitat.

M-BR-5

(Condition of Approval 60.EPD.005) Prior to the issuance of any grading permit that would remove potentially suitable nesting habitat for raptors or songbirds, the Project applicant shall demonstrate to the satisfaction of the County of Riverside that either of the following have been or will be accomplished.

1. Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

2. Any construction activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) will require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected a buffer of 300 feet (500 feet for raptors) around the nest adjacent to construction will be delineated, flagged, and avoided until the nesting cycle is complete. The buffer may be modified and/or other recommendations proposed as determined appropriate by the biological monitor to minimize impacts.

M-BR-6 (Condition of Approval 10.Planning.010) Prior to building permit final inspection, the Project applicant shall demonstrate that payment of the MSHCP Local Development Mitigation Fee has occurred pursuant to Riverside County Ordinance No. 810.

M-BR-7 (Condition of Approval 10.EPD.001) Prior to issuance of building permits, a final landscaping plan shall be submitted to the Riverside County Environmental Programs Department (EPD) for review. The EPD shall review the list of plant species to verify that none of the plant species listed in Table 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*, are identified in the landscape plans.

M-BR-8 (Condition of Approval 60.EPD.006) Prior to issuance of grading permits, a habitat mitigation and monitoring plan (HMMP) shall be prepared to address mitigation for MSHCP Riparian/Riverine resources. The HMMP shall provide details as to the implementation of the mitigation, performance standards, maintenance, and future monitoring of the proposed Riparian/Riverine habitat restoration and enhancement. Prior to grading permit final inspection, compensatory mitigation for impacts to 1.16 acres of the MSHCP Riparian/Riverine Areas in on-site and off-site portions of Drainage A shall be provided at a minimum 2:1 ratio by creating and enhancing habitat, as set forth in the Project's Determination of Biologically Equivalent or Superior Preservation (DBESP) prepared by PCR Services Corporation and dated November 2015. The riparian mitigation shall satisfy compensatory mitigation required pursuant to regulatory permits (as required by Mitigation Measure M-BR-4) and Section 6.1.2 of the MSHCP (as required by Mitigation Measure M-BR-1). As summarized in IS/MND Table EA-17, *Acres of Proposed Mitigation Type and Habitat Per Drainage*, Project compensatory mitigation shall consist of the following:

- enhancement to 0.27 acre of riparian habitat in Drainage A;
- enhancement to 0.43 acre of riparian transition in Drainage A and enhancement to 0.29 acre of riparian transition in Drainage B (for a total of 0.72 acre of riparian transition enhancements);
- enhancement to 0.09 acre of upland habitat within Drainage A and 0.71 acre of upland habitat in Drainage B (for a total of 0.80 acre of upland habitat enhancements);
- creation of 0.07 acre of riparian habitat in Drainage A and creation of 0.05 acre of riparian habitat in Drainage B (for a total of 0.12 acre of riparian habitat creations); and

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- creation of 0.64 acre of riparian transition in Drainage A and creation of 0.03 acre of riparian transition in Drainage B (for a total of 0.67 acre of riparian transition creations).

Table EA-17 Acres of Proposed Mitigation Type and Habitat Per Drainage

Mitigation Type	Habitat Type	Area (acres)		
		Drainage A	Drainage B	Total
Enhancement	Riparian	0.27	-	0.27
	Riparian-transition	0.43	0.29	0.72
	Upland	0.09	0.71	0.80
	Subtotal	0.79	1.00	1.79
Creation	Riparian	0.07	0.05	0.12
	Riparian Transition	0.64	0.03	0.67
	Upland	-	-	-
	Subtotal	0.71	0.08	0.79
	Total	1.50	1.08	2.58

(PCR, 2015b, Table 7)

Monitoring:

- M-BR-1 Prior to issuance of grading permits and building permit final inspection, the Riverside County Environmental Programs Department and Building and Safety Department shall ensure that all requirements related to construction or post-construction impacts have been fulfilled.
- M-BR-2 Prior to commencement of grading activities, the Riverside County Environmental Programs Department shall ensure that a pre-construction burrowing owl survey is completed within 30 days prior to initial grading or clearing activities, and shall enforce the identified requirements should any burrowing owl(s) be identified on-site.
- M-BR-3 Prior to issuance of grading permits, the County Building and Safety Department shall verify that the required habitat mitigation and monitoring plan (HMMP) has been approved by the Riverside County Environmental Programs Department. Prior to grading permit final inspection, the Project Applicant shall provide evidence to the Riverside County Environmental Programs Department demonstrating that the required compensatory mitigation has been achieved per the required HMMP.
- M-BR-4 Prior to issuance of grading permits, the Project Applicant shall provide evidence to the Riverside County Environmental Programs Department demonstrating that the required regulatory permits have been obtained from the USACE, RWQCB, and CDFW.
- M-BR-5 Prior to issuance of grading permits, the Riverside County Environmental Programs Department shall verify that either construction activities have been scheduled outside the nesting season, or that a pre-construction survey during the nesting season has taken place and that appropriate buffers have been established from any occupied nests.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
M-BR-6	Prior to building permit final inspection, the Riverside County Building and Safety Department shall verify payment of the MSHCP Local Development Mitigation Fee.				
M-BR-7	Prior to issuance of building permits, the Riverside County Environmental Programs Department shall verify that the landscape plans do not contain any plant species listed in Table 6-2 of the MSHCP.				
M-BR-8	Prior to issuance of grading permits, the County Building and Safety Department shall verify that the required habitat mitigation and monitoring plan (HMMP) has been approved by the Riverside County Environmental Programs Department. Prior to grading permit final inspection, the Project Applicant shall provide evidence to the Riverside County Environmental Programs Department demonstrating that the required compensatory mitigation has been achieved.				

CULTURAL RESOURCES Would the project

8. Historic Resources

a) Alter or destroy an historic site?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5?	☐	☐	☐	☒

Source: Site Inspection; *Phase I and II Cultural Resources Report for the Lake Ranch Project*, Brian F. Smith and Associates, Inc., February 10, 2015.

Findings of Fact:

a & b) A collection of structures in the northeast corner of the property includes some buildings that meet the minimum age threshold under CEQA to be historic. As part of the investigation of the property, a focused historic research effort was conducted to provide information concerning the ownership and age of the structures. Within the compound of structures that were inventoried during the field survey, two structures, a residence and a bunkhouse, appear to date to the 1920s and 1940s, and are therefore considered to be historic. Although the residence was originally built in 1926 and meets the age threshold for possible significance, none of the property owners could be definitively named as ever having resided in the home. Because of the lack of an apparent link to any significant persons, architects, builders, historical events, or specific architectural style, the structure has been evaluated as not significant under CEQA criteria. (BFSA, 2015a, p. 4.0-12)

Only the residence, the garage with attached washroom, and the bunkhouse and sleeping quarters were determined to be old enough for historic consideration. After being evaluated by BFSA, none of the structures were determined to be architecturally unique or significant, and all three were determined to be in an advanced stage of disrepair and near collapse. (BFSA, 2015a, p. 4.0-17)

Based on the information provided in the Phase I and Phase II Cultural Resources Report, the Project site does not contain any historic sites or historical resources as defined in California Code of Regulations, Section 15063.5. Accordingly, there would be no impact to historic resources as a result of the proposed Project.

Mitigation: No mitigation is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	--------------------------------------	--	------------------------------------	--------------

Monitoring: No monitoring is required.

9. Archaeological Resources

a) Alter or destroy an archaeological site.	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
d) Restrict existing religious or sacred uses within the potential impact area?	☐	☐	☐	☒
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	☐	☐	☒	☐

Source: *Phase I and II Cultural Resources Report for the Lake Ranch Project*, Brian F. Smith and Associates, Inc., February 10, 2015 (PDA 04857R3)

Findings of Fact:

a & b) A Phase I and II Cultural Resources Report was prepared for the proposed Project by Brian F. Smith & Associates, the results of which are contained in Appendix E1 to this IS/MND. The Phase I and II Cultural Resources Report includes the results of the cultural resources survey and significance testing program conducted by BFSa for the proposed Project. BFSa conducted the assessment to locate and record any cultural resources present within the Project area in compliance with CEQA, and following County of Riverside Cultural Resource Guidelines.

During the survey, one previously unrecorded prehistoric bedrock milling site (RIV-11,737) was identified and two recorded prehistoric bedrock milling sites (RIV-4,442 and RIV-4,443) were relocated. Significance testing was conducted at each of the three bedrock milling sites. The subsurface excavations at all three prehistoric sites were negative, providing data that confirmed that these sites were temporary use sites for food gathering and processing (BFSa, 2015a, p. 1.0-1)

Because Site RIV-11,737 did not contain any artifacts, it was evaluated as not significant under CEQA criteria due to a lack of both a subsurface deposit and the ability to provide any further research potential. Because Site RIV-4,442 did not produce any artifacts or evidence of subsurface cultural deposits, it was evaluated as not significant under CEQA criteria due to a lack of both a subsurface deposit and the ability to provide any further research potential. Because Site RIV-4,443 did not contain any artifacts, it also was evaluated as not significant under CEQA criteria due to a lack of both a subsurface deposit and the ability to provide any further research potential. (BFSa, 2015a, p. 1.0-2)

Although these sites were evaluated as not CEQA-significant, the potential still exists for buried cultural resources to be impacted during construction activities. When land is cleared, disked, or otherwise disturbed, evidence of surface artifact scatters is typically lost, especially with regards to prehistoric sites. The current status of the Project site appears to have affected the potential to discover any additional scatters of surface artifacts. Additional cultural materials that may have been on-site could have been masked by clearing, orchard operations, disking, and the construction of the dirt roads. Given the prior disturbance within the project that might mask archaeological deposits and the moderate frequency of cultural resources within the property, there is a potential that buried

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

archaeological materials may be present. This is evaluated as a potentially significant impact for which mitigation, in the form of preparation and implementation of a Cultural Resources Mitigation Monitoring and Reporting Program (CRMMRP), would be required. To ensure that the CRMMRP is implemented, Mitigation Measure M-CR-1 has been imposed on the Project. (BFSA, 2015a, pp. 1.0-3, 6.0-2, and 6.0-3)

c) The Project site does not contain a cemetery and no known formal cemeteries are located within the immediate site vicinity. Field surveys conducted on the Project site did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site. Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction. In the event that human remains are discovered during Project grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code §7050.5 as well as Public Resources Code §5097 et. seq. California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. Pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made by the Coroner. If the Coroner determines the remains to be Native American, the California Native American Heritage Commission (NAHC) must be contacted and the NAHC must then immediately notify the "most likely descendant(s)" of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. Mandatory compliance with these requirements would ensure that potential impacts associated with the discovery of human remains would be less than significant and mitigation is not required.

d) There are no religious or sacred uses occurring within the proposed Project site or off-site impact areas. The Project area has largely been disturbed by agricultural activities since at least the 1930s. Accordingly, no impact to religious or sacred uses would occur.

e) The provisions of Public Resources Code § 21074 were established pursuant to California Assembly Bill 52 (AB 52) and the provisions of AB 52 apply to projects, such as the proposed Project, that have a notice of preparation (NOP) or notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015. Pursuant to AB 52 as well as the provision of Senate Bill 18 (SB 18), Riverside County as Lead Agency is required to conducted consultation with any interested Tribes regarding the Project's potential impacts to tribal cultural resources, including tribal cultural resources as defined in Public Resources Code § 21074. The proposed Project complies with both Senate Bill 18 (SB 18) and Assembly Bill 52 (AB 52) requirements for notification and consultation with Native American tribes. A list of 10 tribes as provided by the Native American Heritage Commission were initially sent requests for consultation on March 24, 2014 pursuant to SB 18 requirements. Subsequently requests for notification were sent to 4 tribes on July 13, 2015 pursuant to AB 52 requirements for tribes requesting consultation requests for this geographic area. Both the Pechanga Band of Luiseno Indians and Soboba Band of Luiseno Indians requested consultation with Riverside County. In person meetings with Pechanga representatives were held on April 18, 2013 and May 14, 2014 and in person meetings with Soboba representatives were held on January 27, 2014, May 1, 2014, July 28, 2014. The Project Cultural Resource Report and applicable mitigation and conditions of approval was provided to both tribes. No response has been received from either tribe with comments or concerns on the report, mitigation measures, or conditions of approval. A letter confirming conclusion of consultation was sent on February 18, 2016. Thus, potential impacts

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

associated with causing a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code § 21074 would be less than significant.

Mitigation:

M-CR-1 (Condition of Approval 60.PLANNING.023) Prior to issuance of a grading permit, the Project Applicant shall prepare and submit to the County Archaeologist for review and approval a Cultural Resources Mitigation Monitoring and Reporting Program (CRMMRP). The CRMMRP shall include, but not necessarily be limited to, the following actions:

- 1) Prior to issuance of a grading permit, the Project Applicant shall provide written verification that a certified archaeologist has been retained to implement the monitoring program. This verification shall be presented in a letter from the Project archaeologist to the Riverside County Planning Department.
- 2) The Project Applicant shall enter into an agreement with the Pechanga Tribe to provide Native American monitoring during grading. The Native American monitor shall work in concert with the archaeological monitor to observe ground disturbances and search for cultural materials.
- 3) The certified archaeologist shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program.
- 4) During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and tribal representative shall be on-site, as determined by the consulting archaeologist, to perform periodic inspections of the excavations. The frequency of inspections will depend on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The consulting archaeologist shall have the authority to modify the monitoring program if the potential for cultural resources appears to be less than anticipated.
- 5) Isolates and clearly non-significant deposits will be minimally documented in the field so the monitored grading can proceed.
- 6) In the event that previously unidentified cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance operation in the area of discovery to allow for the evaluation of potentially significant cultural resources. The archaeologist shall contact the lead agency at the time of discovery. The archaeologist, in consultation with the lead agency, shall determine the significance of the discovered resources. The lead agency must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the lead agency before being carried out using professional archaeological methods. If any human bones are discovered, the county coroner and lead agency shall be

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains.

- 7) Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The archaeological monitor(s) shall determine the amount of material to be recovered for an adequate artifact sample for analysis.
- 8) All cultural material collected during the grading monitoring program shall be processed and curated according to the current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility, to be accompanied by payment of the fees necessary for permanent curation.
- 9) A report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the lead agency prior to the issuance of any building permits. The report will include DPR Primary and Archaeological Site Forms.

Monitoring:

M-CR-1 Prior to issuance of any grading permits, the CRMMRP shall be reviewed and approved by the County Archaeologist. During ground-disturbing activities, the provisions of the CRMMRP shall be implemented. Prior to grading permit final inspection, the report documenting the field and analysis results shall be provided to the Riverside County Planning Department.

10. Paleontological Resources

a) Directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature?

☐ ☐ ☐ ☒

Source: General Plan, Figure OS-8 (Paleontological Sensitivity); Riverside County GIS (Riverside County, 2013); *Paleontological Resource Impact Assessment for the Lake Ranch Project site*, Brian F. Smith and Associates, January 22, 2015; (PDP01465).

Findings of Fact: According to Riverside County General Plan Figure OS-8, the proposed Project site is determined to have a "Low" potential for uncovering paleontological resources (Riverside County, 2003a) In addition, and partly due to past disturbance associated with agricultural activities, there are no unique geologic features within the proposed Project site or off-site impact areas. Nonetheless, there is a potential that during grading of the property, unique paleontological resources or sites could be uncovered.

In order to address the site's potential for containing paleontological resources, a paleontological resources assessment was conducted by Brian F. Smith and Associates, the results of which are contained in IS/MND Appendix E2. As noted in the paleontological resources impact assessment, the Project site comprises surface exposures of Lower Cretaceous (~ 110 ± million year old) granitic rocks

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

of the Cajalco pluton in the very northeast corner, gabbroic rocks of the Peninsular Ranges batholith across most of the northern half of the property, and associated metamorphic rocks and Quaternary very old alluvial fan deposits across the southern portion of the property. The mapped granitic and gabbroic exposures consist entirely of mixed and undifferentiated granodiorite and hornblende gabbro. These rocks do not have any possibility of ever yielding fossils of any sort. (BFSA, 2015b, pp. 1-2) Thus, no impact to paleontological resources would occur with development of the northern one-half to two-thirds of the site.

The southern one-third to one-half of the Project site is mapped as lower Pleistocene (~ 1 to ~ 2 million year old) very old alluvial fan sediments that are capped by moderate to well-developed pedogenic soils with subsoil horizons as much as six to 10 feet thick. The deep pedogenic soils developed on the proximal fanhead exposures of the relic alluvial fan sediments found there are also regarded as having a low paleontological resource potential and resource sensitivity by Riverside County GIS (Riverside County, 2015; BFSA, 2015b, p. 2). Thin patches of unmapped Quaternary alluvium of late Holocene age may also be present, but are too limited to be mapped on-site and are too young to have any paleontological resource potential. A pedestrian field survey of the entire property conducted by personnel of Brian F. Smith and Associates, Inc. on March 4, 2014 did not reveal any materials that could be considered fossiliferous.

According to BFSA, a museum collections and records search would not yield any paleontological resource information contrary to the information presented above. BFSA concludes that a paleontological mitigation and monitoring program is not required for any portion of the Project site prior to development because impacts to paleontological resources would not occur. (BFSA, 2015b, p. 2) Accordingly, no impacts to paleontological resources would occur as a result of the Project, and no mitigation would be required.

Mitigation: No mitigation is required

Monitoring: No monitoring is required.

GEOLOGY AND SOILS Would the project

11. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death?

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

b) Be subject to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

☐	☐	☐	☒
--------------------------	--------------------------	--------------------------	-------------------------------------

Source: General Plan, Figure S-2 (Earthquake Fault Study Zones); GIS database (Riverside County, 2013); *Geotechnical EIR-Level Assessment, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., October 27, 2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact:

a & b) As is the case with most locations in Southern California, the subject site is located in a region that is characterized by moderate to high seismic activity. The Project site and vicinity have

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

experienced strong ground shaking due to earthquakes on a number of occasions in historic time. The Project site is not located within an "Alquist-Priolo" Special Studies Zone, nor is the site identified within a County fault hazard zone. The nearest active fault zone to the Project site that is identified as an Alquist-Priolo Earthquake Fault Zone is the Elsinore fault, located approximately 7.5 miles southwest of the Project site. The last major rupture along the Elsinore fault was a magnitude 6 event in 1910. No surface rupture was associated with this event. The last surface rupture event likely occurred in the 18th century. (Petra, 2014, pp. 6-9; Riverside County, 2003a, Figure S-2; Petra, 2015, pp. 4-5) Additionally, Petra Geotechnical indicates that the nearest fault that would generate the most severe site ground motions is the Oak Ridge fault (Onshore segment), located approximately 3.9 miles from the site; however, the Oak Ridge fault is not mapped as an Alquist-Priolo Special Studies Zone.

Ground shaking hazards caused by earthquakes along nearby fault zones and other active regional faults do exist. However, Section 1613 of the 2013 California Building Code (CBC) identifies design features required to be implemented to resist the effects of seismic ground motions. With mandatory compliance to the 2013 California Building Code requirements, or applicable building code at the time of Project construction, future Project residents and structures would not be exposed to substantial adverse ground-shaking effects associated with Alquist-Priolo Earthquake Fault Zones or County Fault Hazard Zones. Accordingly, impacts would be less than significant. (Petra, 2014, pp. 14-15; Petra, 2015, pp. 16-17)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

12. Liquefaction Potential Zone

a) Be subject to seismic-related ground failure, including liquefaction?

☐
☒
☐
☐

Source: General Plan, Figure S-3 (Generalized Liquefaction); Riverside County GIS (Riverside County, 2013); *Geotechnical EIR-Level Assessment, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., October 27, 2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact: Seismic agitation of relatively loose saturated sands, silty sands, and some silts can result in a buildup of pore pressure. If the pore pressure exceeds the overburden stresses, a temporary quick condition known as liquefaction can occur. Liquefaction effects can manifest in several ways including: 1) loss of bearing; 2) lateral spread; 3) dynamic settlement; and 4) flow failure. Lateral spreading has typically been the most damaging mode of failure. In general, the more recent that sediment has been deposited, the more likely it will be susceptible to liquefaction. Other factors that must be considered are: groundwater, confining stresses, relative density, and the intensity and duration of seismically-induced ground shaking.

Riverside County GIS shows that only the southern portions of the Project site have a "low" liquefaction potential, with no potential for liquefaction identified in the northern portions of the site. (Riverside County, 2015). Based on a review of the site conducted by Petra Geotechnical, the southern portions of the site are identified as having a low potential for liquefaction, requiring no special design requirements beyond mandatory compliance with the 2013 CBC. (Petra, 2015, pp. F-1 and F-2)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Accordingly, and based on information available from Riverside County GIS and a site-specific analysis conducted by the Project geologist (Petra Geotechnical), the proposed Project would not be subject to seismic-related ground failure, including liquefaction, and impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

13. Ground-shaking Zone

Be subject to strong seismic ground shaking?

☐
☐
☒
☐

Source: General Plan, Figure S-4 (Earthquake-Induced Slope Instability Map); General Plan Figures S-12 through S-21 (showing General Ground Shaking Risk); *Geotechnical EIR-Level Assessment, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., October 27, 2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact: According to information contained in the Project-specific geotechnical evaluations (IS/MND Appendices F1 and F2), the closest known fault considered capable of causing strong ground motion at the subject site is the Elsinore fault. Located approximately 7.5 miles southwest of the Project site, the Elsinore fault is a series of right-lateral strike slip faults which trend to the northwest from the Salton Sea to the Santa Ana river basin. Published investigations reveal that this fault offsets Holocene stratigraphy. For this reason, this fault is considered active and is included within the boundaries of an Alquist-Priolo Earthquake Fault zone. The last major rupture was a magnitude 6.0 event in 1910. No surface rupture was associated with this event. The last surface rupture event likely occurred in the 18th century. Two additional faults, Whittier and San Jacinto, are considered to be significant seismogenic sources are located in relatively close proximity to the subject site. (Petra, 2014, pp. 7-9; Petra, 2015, pp. 4-5)

As discussed above under the analysis of Threshold 11.a), ground shaking hazards caused by earthquakes along the Elsinore, Whittier, and San Jacinto Fault Zones and other active regional faults do exist. However, Section 1613 of the 2013 California Building Code (CBC) identifies design features required to be implemented to resist the effects of seismic ground motions. With mandatory compliance to the 2013 California Building Code requirements, or the applicable building code at the time of Project construction, impacts due to strong seismic ground shaking would be less than significant, and no mitigation would be required. (Petra, 2014, p. 14; Petra, 2015, pp. 16-17)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

14. Landslide Risk

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?

☐
☐
☒
☐

Source: General Plan, Figure S-4 (Earthquake-Induced Slope Instability Map); *Geotechnical EIR-Level Assessment, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., October 27,

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact:

The Project site does not lie within a designated seismically-induced landslide hazard zone. Proposed slopes are planned at 2:1 slope ratios to heights of 25 to 45 feet. Provided that remedial and design grading within the site are performed in accordance with local grading ordinances, current standards of practice in the area, and mandatory compliance with the site-specific recommendations to be provided by the Project's geotechnical evaluations (IS/MND Appendices F1 and F2), the potential for gross or surficial slope instability will be reduced to a less than significant level. (Petra, 2014, pp. 17-18; Petra, 2015, pp. 8-10)

Secondary effects of seismic activity that are typically considered as possible hazards to a particular site include several types of ground failure as well as induced flooding. The general types of ground failure that can occur as a consequence of severe ground shaking include landsliding, ground subsidence, ground lurching, shallow ground rupture, lateral spreading, liquefaction, and soil strength loss. The probability of occurrence of each type of ground failure depends on the severity of the earthquake, distance from the causative fault, topography, soil, and groundwater conditions, in addition to other factors. (Petra, 2014, p. 17) Given that the site does not contain significant thicknesses of loose compressible soils and that the Project's geotechnical reports recommend that these soils be removed and replaced with engineered fill, lateral spreading, and soil strength loss (collapse) are not considered potential hazards. (Petra, 2015, p. 5)

Additionally, and as indicated under Threshold 12, the Project is not subject to significant hazards associated with liquefaction.

Accordingly, and assuming mandatory compliance with the recommendations of the Project's geotechnical evaluation (IS/MND Appendices F1 and F2) and the 2013 CBC requirements, impacts due to geologic units or soils that are unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards, would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

15. Ground Subsidence

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?

☐ ☐ ☒ ☐

Source: General Plan, Figure S-7 (Documented Subsidence Areas); *Geotechnical EIR-Level Assessment, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., October 27, 2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact: Riverside County General Plan Figure S-7 indicates that the proposed Project site is not susceptible to ground subsidence and that no documented subsidence has occurred on the Project site. There are no components of the Project or the Project site's geotechnical characteristics

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

that could lead to unstable geologic conditions that could result in ground subsidence. As such, impacts due to ground subsidence would be less than significant requiring no mitigation. (Riverside County, 2003a; Petra, 2015, p. 5)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

16. Other Geologic Hazards

a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?

☐
☒
☐
☐

Source: On-site Inspection; Project Application Materials; General Plan, Figure S-10 (Dam Failure Inundation Zones). Petra Geotechnical Inc, *Geotechnical EIR-Level Assessment Tentative Tract 36730 Lake Ranch Project*, October 27, 2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact: There are no active or dormant volcanoes within Riverside County; thus, no impacts resulting from volcano-related hazards would occur. Although the Project site contains a steep hillside in the northwestern corner of the site, a site-specific geotechnical evaluation conducted by Petra Geotechnical (IS/MND Appendix F1) concluded that the hillform consists of exposed bedrock; as such, this hillform has no potential to expose future structures or residences to hazards associated with mudflow (Petra, 2014, p. 6). There are no other hillforms abutting the Project site with the potential to result in mudflow that could pose a threat to future residents or structures.

According to Riverside County General Plan Figure S-10, the Project site would be subject to water inundation in the event that there is a structural failure of the Lake Mathews Dam, including dam failures that could occur from seismically-induced seiches. The Lake Mathews Dam and spillway are located approximately 0.20 kilometers south of the southern boundary of the Project site. If a seismically-induced seiche were to occur within Lake Mathews when the dam basin is filled to capacity, water could breach and/or physically damage the dam and cause flooding through a majority of the southern portions of the project. In recognition of this possibility, the Lake Mathews/Woodcrest Area Plan includes three policies intended to attenuate the risk of dam failure to persons or property. Specifically, Policy LMWAP 14.2 requires adherence to the flood proofing, flood protection requirements, and flood management review requirements of Riverside County Ordinance No. 458, which regulates flood hazards. Additionally, Policy LMWAP 14.3 requires proposed development projects (such as the proposed Project) to undergo review by the Riverside County Flood Control and Water Conservation District. Moreover, County Ordinance No. 457 establishes building standards and codes that apply to development that is subject to inundation. Compliance with the above-reference regulations and policies would ensure that any potential dam inundation hazards associated with future development would be less than significant. Nonetheless, the potential for inundation due to seismically-induced seiches at the Lake Mathews Dam represents a significant impact for which mitigation would be required. With implementation of the required mitigation, which requires review of implementing building permits to ensure flood hazards are attenuated and education of future homeowners, impacts due to seismically-induced seiches that may pose a threat to future residents and/or structures would be reduced to a level below significance. M-GEO-1 requires the homeowner be informed about their home being located within a dam inundation area through several disclosure mechanisms. M-GEO-1 would ensure that all future residents on the Project site are aware of their home being located in a dam inundation hazard area, the risks associated with the home being

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

located in an inundation zone, and the public service resources in place to help address dam inundation effects in the event the Lake Mathews Dam fails. Therefore, with mandatory compliance to LMWAP policies, and mitigation measure M-GEO-1, the Project's impacts due to seismically-induced seiche hazards would be less than significant.

Mitigation:

~~M-GEO-1 (Condition of Approval XX.XX.XX) Prior to the issuance of building permits, the County of Riverside Building and Safety Department shall review the construction drawings and verify that the structural foundations of every habitable structure are designed to withstand flooding events associated with potential failure of the Lake Mathews Dam.~~

M-GEO-12 (Condition of Approval 80.Planning.022) Prior to building permit final inspection, evidence shall be provided to the Riverside County Building and Safety Department that all home deeds include a disclosure about the Project site's location within a dam inundation hazard area. Additionally, as part of future home sale documentation, the Project Applicant shall provide each new homeowner a copy of the Federal Emergency Management Agency's informational brochure, entitled "Living with Dams: Know Your Risks (FEMA P-956)." Additionally, each new homeowner shall be provided with informational materials from the Riverside County Fire Department's Community Emergency Response Team (CERT), including information about CERT's role in helping communities address potential impacts due to natural and man-made hazards, and information relating to how future residents can become involved and undergo CERT training to assist the future residents of the community in the event of failure of the Lake Mathews Dam.

Monitoring:

~~M-GEO-1 Prior to the issuance of a building permit, the County of Riverside Building and Safety Department shall verify that all structures on site have been designed to ensure that dam-related hazards would not result in the loss of or substantial damage to any future home on site.~~

M-GEO-12 Prior to building permit final inspection, the Project Applicant shall provide evidence to Riverside County demonstrating that the disclosure has been provided on all deeds, and that the sales documentation includes the FEMA and CERT informational materials.

17. Slopes

a) Change topography or ground surface relief features?	☐	☐	☒	☐
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?	☐	☐	☒	☐
c) Result in grading that affects or negates subsurface sewage disposal systems?	☐	☐	☐	☒

Source: Project Application Materials; Petra Geotechnical Inc, *Geotechnical EIR-Level Assessment Tentative Tract 36730 Lake Ranch Project*, October 27, 2014; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Findings of Fact:

a) Under existing conditions, elevations on-site generally decrease from northwest to southeast. Implementation of the proposed Project would require grading activities involving the lowering of the northwestern portions of the site and the raising of the southern, southeastern, and eastern portions of the site as necessary to accommodate residential development. As part of the Project's grading plan, the hillside in the northwestern portion of the site would be graded at a maximum 2:1 gradient to increase areas suitable for residential development while providing fill material to facilitate the construction of residential pads in other portions of the site. Although the Project would result in a change to the site's existing topography, there would be no adverse effects to the environment resulting from site grading beyond what is already evaluated and disclosed throughout this IS/MND. Accordingly, impacts due to changes to the site's topography and ground surface relief features are a less-than-significant impact.

b) As shown on TTM 36730, all slopes proposed as part of the Project would be constructed at a maximum slope angle of 2:1. The only slopes that would be constructed at a height exceeding ten feet occurs in the northwestern portion of the site and between the residential development and the MSHCP Riparian/Riverine Area in Lot 'A.' Along the slope in the northwestern portion of the site, grading would lower the elevation of the southeastern face of the hillside. The Project's geologist (Petra Geotechnical) evaluated these slopes and determined that the slopes are expected to be grossly stable as designed (Petra, 2014, pp. 17-18; Petra, 2015, pp. 9-10). The slope proposed northerly of Lot 'A' would be constructed at a gradient of 2:1 and would measure up to approximately 17 feet in height. This slope would be constructed with hardened slope protection (of a type to be determined with future implementing grading permits) along the first two feet of the base of the slope, which would assure that this slope is grossly stable. Accordingly, although the Project would result in the creation of slopes exceeding 10 feet in height, based on the analysis conducted by the Petra Geotechnical, such slopes would not result in any adverse impacts to the environment. Accordingly, impacts associated with the creation of cut or fill slopes greater than 2:1 or higher than 10 feet in height would be less than significant.

c) There are no subsurface sewage disposal systems within the areas that would be permitted for physical disturbance as part of the proposed Project. Therefore, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

18. Soils

a) Result in substantial soil erosion or the loss of topsoil?

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

b) Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?

☐	☒	☐	☐
--------------------------	-------------------------------------	--------------------------	--------------------------

c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

☐	☐	☐	☒
--------------------------	--------------------------	--------------------------	-------------------------------------

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Source: Project Application Materials; Riverside County Municipal Code Chapter 15.12; *Hydrology Report*, MDS Consulting, July 31, 2015; *Project Specific Water Quality Management Plan*, MDS Consulting, August 3, 2015; *Tentative Map Review, Tentative Tract 36730, Lake Ranch Project*, Petra Geotechnical, Inc., September 18, 2015.

Findings of Fact:

a) Proposed grading activities associated with the Project would temporarily expose underlying soils to water and air, which would increase erosion susceptibility while the soils are exposed. 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. Erosion by water would be greatest during the first rainy season after grading and before the Project's structure foundations are established and paving and landscaping occur. Erosion by wind would be highest during periods of high wind speeds when soils are exposed.

Pursuant to the requirements of the State Water Resources Control Board, the Project Applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. Additionally, during grading and other construction activities involving soil exposure or the transport of earth materials, Chapter 15.12 (Uniform Building Code) of the Riverside County Municipal Code, which establishes, in part, requirements for the control of dust and erosion during construction, would apply to the Project. As part of the requirements of Chapter 15.12, the Project Applicant would be required to prepare an erosion control plan that would address construction fencing, sand bags, and other erosion-control features that would be implemented during the construction phase to reduce the site's potential for soil erosion or the loss of topsoil. Requirements for the reduction of particulate matter in the air also would apply, pursuant to SCAQMD Rule 403. Mandatory compliance with the Project's NPDES permit and these regulatory requirements would ensure that water and wind erosion impacts would be less than significant. Mitigation is not required.

Following construction, 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. Only nominal areas of exposed soil, if any, would occur in the site's landscaped areas. The only potential for erosion effects to occur during Project operation would be indirect effects from storm water discharged from the property. As detailed in the Hydrology Report prepared for the proposed Project, the proposed detention basin to be located southeast of the Project site (south of El Sobrante Road) would provide the necessary runoff detention in order to mitigate for urban flows generated by the proposed development. Based on the analysis presented in the Project's Hydrology Report (IS/MND Appendix I1), post development runoff from the site would decrease during the 100 year (Q100) storm events (i.e., from 535.7 CFS under pre-development conditions to 421.1 CFS under post-development conditions). Accordingly, total runoff from the site would not substantially increase with Project implementation, thereby demonstrating that the Project would not substantially increase erosion hazards as compared to the existing condition. Since the drainage associated with the Project would be fully controlled via the on-site drainage plan and/or would be similar to existing conditions, soil erosion and the loss of topsoil would not increase substantially as compared to existing conditions.

In addition, the Project Applicant is required to prepare and submit to the County for approval of a Project-specific Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP). The SWPPP and WQMP must identify and implement an effective combination of

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

erosion control and sediment control measures (i.e., Best Management Practices, or BMPs) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges. Adherence to the requirements noted in the Project's required WQMP (refer to IS/MND Appendix I2) and site-specific SWPPP would further ensure that potential erosion and sedimentation effects would be less than significant.

b) Expansive soils are soils that experience volumetric changes in response increases or decreases in moisture content. Relatively thin, rigid structural elements such as building floor slabs and exterior concrete flatwork may experience uplift, shifting, or cracking as a result of swelling or contraction of expansive soils. In recognition of these issues, Section 1808 of the California Building Code contains provisions for design of building foundations and floor slabs to mitigate the potential detrimental effects of expansive soils. Based on the analysis included in the Project's geotechnical reports, (IS/MND Appendices F1 and F2) most onsite soil and bedrock material will typically possess "very low" to "medium" expansion potential (Petra, 2015, p. 19). Furthermore, based on the preliminary grading plan, imported soil material may be required to establish the planned finished grade elevations. Depending on the source of the imported soil, it is possible that expansive soils may be incorporated into onsite fills and ultimately be exposed at finished grades within proposed building pad areas. This is evaluated as a potentially significant impact for which mitigation would be required.

c) No septic tanks or alternative waste water disposal systems are proposed to be constructed or expanded as part of the Project. Accordingly, no impact would occur.

Mitigation:

M-GEO-23 (Condition of Approval 60.Planning.003) In the event that imported soil material is required to establish the design finished grades within the site, adequate control shall be provided prior to and during import operations to ensure that the imported soil material is compatible with onsite soils in terms of expansion potential. If, after completion of grading, it is determined that near-surface soils within building pad areas exhibit an elevated expansion potential, then grading plans shall demonstrate that the proper design of building foundations, floor slabs and exterior improvements are designed to alleviate the potential uplift forces that can develop in expansive soils..

Monitoring:

M-GEO-23 A qualified geotechnical consultant shall be responsible for monitoring imported soils materials for their expansive potential. If soils are determined to contain expansive properties, then the Project's geologist shall ensure appropriate measures are incorporated to protect building foundations, floor slabs, and other exterior improvements.

19. Erosion

a) Change deposition, siltation, or erosion that may modify the channel of a river or stream or the bed of a lake?

☐ ☐ ☐ ☒

b) Result in any increase in water erosion either on or off site?

☐ ☐ ☒ ☐

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Source: Project Application Materials; On-site Inspection; *Hydrology Report*, MDS Consulting, July 31, 2015; *Project Specific Water Quality Management Plan*, MDS Consulting, August 3, 2015

Findings of Fact:

a & b) As indicated under the discussion and analysis of Threshold 18.a), above, proposed grading activities associated with the Project would temporarily expose underlying soils to water and air, which would increase erosion susceptibility while the soils are exposed. 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. Erosion by water would be greatest during the first rainy season after grading and before the Project's structure foundations are established and paving and landscaping occur. Erosion by wind would be highest during periods of high wind speeds when soils are exposed.

Pursuant to the requirements of the State Water Resources Control Board, the Project Applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. Additionally, during grading and other construction activities involving soil exposure or the transport of earth materials, Chapter 15.12 (Uniform Building Code) of the Riverside County Municipal Code, which establishes, in part, requirements for the control of dust and erosion during construction, would apply to the Project. As part of the requirements of Chapter 15.12, the Project Applicant would be required to prepare an erosion control plan that would address construction fencing, sand bags, and other erosion-control features that would be implemented during the construction phase to reduce the site's potential for soil erosion or the loss of topsoil. Requirements for the reduction of particulate matter in the air also would apply, pursuant to SCAQMD Rule 403. Mandatory compliance with the Project's NPDES permit and these regulatory requirements would ensure that erosion impacts during construction activities would be less than significant. Mitigation is not required.

Following construction, erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces. Only nominal areas of exposed soil, if any, would occur in the site's landscaped areas. The only potential for erosion effects to occur during Project operation would be indirect effects from storm water discharged from the property. As detailed in the Hydrology Report prepared for the proposed Project (IS/MND Appendix I1), the proposed detention basin to be located southeast of El Sobrante Road would provide the necessary runoff detention in order to mitigate for urban flows generated by the proposed development. Based on the analysis presented in the Project's Hydrology Report, post development runoff from the site would decrease during the 100 year (Q100) storm events (i.e., from 535.7 CFS under pre-development conditions to 421.1 CFS under post-development conditions). Accordingly, total runoff from the site would not substantially increase with Project implementation, thereby demonstrating that the Project would not substantially increase erosion hazards as compared to the existing condition. Since the drainage associated with the Project would be fully controlled via the on-site drainage plan and/or would be similar to existing conditions, the rate and amount of erosion would not increase substantially as compared to existing conditions; thus, impacts due to water erosion would be less than significant under long-term conditions. Furthermore, because the Project would not substantially alter the drainage patterns of the site as compared to the existing condition, there would be no impact due to changes in the deposition, siltation, or erosion that may modify the channel of a river or stream or the bed of a lake, and no impact would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Mitigation: No mitigation is required beyond mandatory compliance with the BMPs specified in the site-specific WQMP, which would be enforced as part of the Project's conditions of approval.

Monitoring: Annual inspections will verify compliance with the Project's conditions of approval.

20. Wind Erosion and Blowsand from project either on or off site.

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

a) Be impacted by or result in an increase in wind erosion and blowsand, either on or off site?

Source: General Plan, Figure S-8 (Wind Erosion Susceptibility Map); Ord. 460, Sec. 14.2; Ord. 484

Findings of Fact:

Proposed grading activities would expose underlying soils at the Project site, which would increase erosion susceptibility during grading and construction activities. Exposed soils would be subject to erosion due to the removal of stabilizing vegetation and exposure of these erodible materials to wind. Erosion by wind would be highest during periods of high wind speeds.

The Project site is considered to have a "moderate" susceptibility to wind erosion (Riverside County, 2003a, Figure S-8). During grading and other construction activities involving soil exposure or the transport of earth materials, significant short-term impacts associated with wind erosion would be precluded with mandatory compliance to the Project's SWPPP and WQMP (described above) and Riverside County Ordinance No. 484.2, which establishes requirements for the control of blowing sand. In addition, the Project would be required to comply with South Coast Air Quality Management District (SCAQMD) Rule 403, which addresses the reduction of airborne particulate matter with mandatory compliance to these regulatory requirements. Wind erosion impacts would be less than significant during construction and mitigation is not required.

Following construction, wind erosion on the Project site would be negligible, as the disturbed areas would be landscaped or covered with impervious surfaces. Therefore, implementation of the proposed Project would not significantly increase the risk of long-term wind erosion on- or off-site, and impacts would be less than significant.

Mitigation: No mitigation is required beyond mandatory compliance with the BMPs specified in the site-specific WQMP, which would be enforced as part of the Project's conditions of approval.

Monitoring: Construction contractors shall ensure compliance with the BMPs specified in the site-specific WQMP. The Riverside County Building and Safety Department shall verify that the various BMPs have been adhered to during both construction and prior to final grading inspection.

GREENHOUSE GAS EMISSIONS Would the project

21. Greenhouse Gas Emissions

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

☐	☐	☐	☒
--------------------------	--------------------------	--------------------------	-------------------------------------

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Source: *Lake Ranch (TTM No. 36730) Greenhouse Gas Analysis*, Urban Crossroads, Inc., April 13, 2015;

Findings of Fact: Background

Global Climate Change (GCC) refers to the change in average meteorological conditions on the Earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO₂ (Carbon Dioxide), NO₂ (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. According to the California Air Resources Board (CARB), the climate change since the industrial revolution differs from previous climate changes in both rate and magnitude. (Urban Crossroads, 2015b, p. 10).

Gases that trap heat in the atmosphere are often referred to as GHG's. GHG's 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 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, 2015b, pp. 10-11).

Although California's rate of growth of GHG 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 carbon dioxide equivalent (CO₂e) GHG emissions. Despite a population increase of 16 percent between 1990 and 2004, California has substantially slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls (Urban Crossroads, 2015b, p. 11).

An individual project like the proposed Project cannot generate enough GHG emissions to effect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHG combined with the world-wide increase of all other sources of GHG, which when taken together constitute potential influences on GCC (Urban Crossroads, 2015b, p. 9).

Methodology

CEQA Guidelines Section 15064.4 (b) (1) states that a lead agency may use a model or methodology to quantify GHG emissions associated with a project. On October 2, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CALEEMOD™) v2013.2.2. The purpose of this model is to more accurately calculate construction-source and operational-source criteria pollutants (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. As such, the latest version of CALEEMOD™ was used for this Project to determine construction and operational air quality impacts. (Urban Crossroads, 2015b, pp. 33-34).

Thresholds for Determining Significance

In order to assess the significance of a proposed project's environmental impacts it is necessary to

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

identify quantitative or qualitative thresholds which, if exceeded, would constitute a finding of significance. While Project-related GHG emissions can be estimated, the direct impacts of such emissions on climate change 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 affect global climate change. The CEQA Guideline amendments do not identify a threshold of significance for greenhouse gas 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. (Urban Crossroads, 2015b, pp. 27-28).

The CEQA Guidelines indicate that a project would potentially 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. (Urban Crossroads, 2015b, p. 27).

A 30% reduction from BAU conditions is utilized as the significance threshold for GHG impacts, based on the Riverside County Planning Department's Standard Operating Procedure. The "Standard Operating Procedure" released in May 2010 by the County of Riverside Planning Department states that, "until such time as a binding regulatory guidance or a more specific threshold is adopted by a regulatory agency, a demonstration by the project applicant that the project has reduced GHG emission by 30% or more below a business-as-usual standard shall suffice for demonstrating the project has a less than significant impact." The SOP later states that "for purposes of this Standard Operating Procedure, "business-as-usual" shall mean those emissions that would occur in 2020 if the average baseline emissions during the 2002-2004 period were grown to 2020 levels without control" (Urban Crossroads, 2015b, p. 31) Based on discussion within the Riverside County Planning Department's Standard Operating Procedure, the analysis approach applied herein is appropriate and applicable in answering the two CEQA questions related to GHG emissions for the proposed Project (Urban Crossroads, 2015b, p. 33).

Project-Related Greenhouse Gas Emissions

In order to assess the Project's potential to result in significant impacts due to GHG emissions, a Project-specific greenhouse gas analysis was conducted for the Project. A copy of the greenhouse gas analysis is provided as Appendix G to this IS/MND. Provided below is a summary of the findings from the Project's GHG analysis.

Project-Related Greenhouse Gas Emissions

On October 2, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2013.2.2. The purpose of this model is to more accurately 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 impacts. Output from the model runs for both construction and operational activity are provided in Appendix 3.1 of the Project's Greenhouse Gas Analysis (IS/MND Appendix G). (Urban Crossroads, 2015b, pp. 33-34)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Construction Emissions

Construction activities associated with the proposed Project will result in emissions of CO₂ and CH₄ from construction activities. The types of construction equipment and material use would be very similar for buildout of the currently adopted zoning and the proposed Project. As such, GHG emissions related to construction activity identified in the report, *Lake Ranch (TTM No. 36730) Air Quality Impact Analysis Report*, prepared by Urban Crossroads, Inc., would represent construction activity for both the business as usual (BAU) and Project scenarios. For the construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total greenhouse gas emissions for the construction activities, dividing it by the 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, 2015b, p. 34).

Operational Emissions

Operational activities associated with the proposed Project would result in emissions of CO₂, CH₄, and N₂O from the following primary sources (Urban Crossroads, 2015b, p. 34):

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Solid Waste
- Water Supply, Treatment and Distribution

Please refer to Section 3.5 of the Project's greenhouse gas analysis (IS/MND Appendix G) for a detailed description of the various sources of GHGs associated with the above operational characteristics. (Urban Crossroads, 2015b, pp. 35-36)

Emissions Summary

The total amount of Project-related GHG emissions for BAU scenario would total 6,501.69 MTCO₂e, as shown on Table EA-18, *Total Annual Project Greenhouse Gas Emissions (BAU Year 2005)*. The total amount of Project-related GHG emissions for the year 2020, which accounts for compliance with regulations adopted to reduce GHGs as well as project design features that would be imposed by Mitigation Measures M-GG-1 and M-GG-2, would total 4,519.46 MTCO₂e as shown on Table EA-19, *Total Annual Project Greenhouse Gas Emissions (BAU Year 2005)* (Urban Crossroads, 2015b, pp. 36-37). Regulations that would apply to the proposed Project and that would serve to reduce GHG emissions include the following (Urban Crossroads, 2015b, p. 6):

- Global Warming Solutions Act of 2006 (AB 32)
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375)
- Pavely Fuel Efficiency Standards (AB 1493). 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.
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions.

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-18 Total Annual Project Greenhouse Gas Emissions (BAU Year 2005)

Emission Source	Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	Total CO ₂ E
Construction Emissions (amortized over 30 years)	100.38	0.017	--	100.74
Area	69.90	8.59e-3	1.20e-3	70.45
Energy	1,155.17	0.04	0.02	1,160.86
Mobile Sources	4,891.83	0.42	--	4,900.60
Waste	64.75	3.83	--	145.11
Water Usage	107.18	0.58	0.01	123.93
Total CO ₂ E (All Sources)	6,501.69			

Source: CalEEMod™ model output. See Appendix 3.1 of the Greenhouse Gas Analysis for detailed model outputs.

Notes: Totals obtained from CalEEMod™ and may not total 100% due to rounding. Table results include scientific notation. e is used to represent times ten to the power (which would be written as 10^{b11}) and is followed by the value of the exponent. (Urban Crossroads, 2015b, Table 3-2)

Table EA-19 Year 2020 Greenhouse Gas Emissions Summary (With Project Design Features)

Emission Source	Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	Total CO ₂ E
Construction Emissions (amortized over 30 years)	100.38	0.017	--	100.74
Area	69.90	5.72e-3	1.20e-3	70.39
Energy	844.36	0.03	0.01	849.16
Mobile Sources	3,277.73	0.11	--	3,280.04
Waste	64.75	3.83	--	145.11
Water Usage	60.64	0.47	0.01	74.02
Total CO ₂ E (All Sources)	4,519.46			

Source: CalEEMod™ model output. See Appendix 3.1 of the Greenhouse Gas Analysis for detailed model outputs.

Notes: Totals obtained from CalEEMod™ and may not total 100% due to rounding. Table results include scientific notation. e is used to represent times ten to the power (which would be written as 10^{b11}) and is followed by the value of the exponent. (Urban Crossroads, 2015b, Table 3-3)

- 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.
- 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.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

As shown in Table EA-20, *Summary of GHG Emissions for BAU vs Project*, with implementation of Mitigation Measures M-GG-1 and M-GG-2 and mandatory compliance with the above-listed regulations, the Project would achieve an emissions reduction of 30.49% when compared to the BAU scenario. This reduction meets the target reduction percentage of 30% based on the Riverside County Planning Department's SOP. (Urban Crossroads, 2015b, p. 36)

Would the Project:

a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

As shown in Table EA-20, with implementation of Mitigation Measures M-GG-1 and M-GG-2 and compliance with standard regulatory requirements, the Project would achieve a GHG reduction of approximately 30.49% below BAU, which exceeds the County's threshold of significance of 30%

below BAU. Accordingly, the Project's GHG emissions would be less than significant on both a direct and cumulative basis, and additional mitigation (beyond M-GG-1 and M-GG-2) would not be required.

Table EA-20 Summary of GHG Emissions for BAU vs Project

Category	CO2e Emissions	
	BAU, Year 2005 Without Project Design Features	Project, Year 2020 With Project Design Features
	Metric Tons per Year	
Construction	100.74	100.74
Area	70.45	70.39
Energy Use	1,160.86	849.16
Mobile Sources	4,900.60	3,280.04
Waste Disposed	145.11	114.11
Water Use	123.93	74.02
Total	6,501.69	4,519.46
Project Improvement over BAU	30.49%	

b) *Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

As indicated above, the Project would be subject to the following regulatory requirements related to GHG emissions:

- Global Warming Solutions Act of 2006 (AB 32)
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375)
- Pavely 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.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- 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 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes.
- 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.

Assuming mandatory compliance with the above-listed regulatory measures, the following provides a discussion and analysis of the Project's consistency with the provisions of AB 32 and SB 375.

Project Consistency with AB 32

AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan. To evaluate the Project's GHG impacts the proposed Project's emissions are compared with the BAU scenario to determine if the development is likely to be consistent with the Scoping Plan designed to implement AB 32 in California, which calls for an approximate 30% reduction from BAU. (Urban Crossroads, 2015b, p. 1)

On February 10, 2014, CARB released a Draft Proposed First Update of the Scoping Plan. The draft recalculates 1990 GHG emissions using new global warming potentials identified in the IPCC Fourth Assessment Report released in 2007. 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 MTCO₂e (down from 509 MTCO₂e), or approximately 15.3 percent (down from 30 percent), from the BAU condition. (Urban Crossroads, 2015b, pp. 1-2)

Although CARB has released an update to the Scoping Plan and reduction targets from BAU, it is still appropriate to utilize the previous 30% reduction from BAU since the modeling tools available are not able to easily segregate the inclusion of the renewable portfolio standards, and Pavley requirements that are now included in the revised BAU scenario. The proposed Project would generate GHG emissions from a variety of sources which would all emit CO₂, CH₄, and N₂O. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the proposed Project. (Urban Crossroads, 2015b, p. 2)

As stated previously, the Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The Scoping Plan recommendations serve as statewide strategies to reduce the state's existing GHG emissions and contributions from proposed projects. Table EA-21, *Project Consistency With Scoping Plan Greenhouse Gas Emission Reduction Strategies*, highlights measures that have or will be developed under the Scoping Plan and that would be applicable to the Project. Therefore, the Project would not conflict with or obstruct implementation of AB 32. (Urban Crossroads, 2015b, p. 2)

Project Consistency with SB 375

Senate Bill 375 (SB 375) creates a formal process that builds on the experience of voluntary regional

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

visioning initiatives in California, often referred to as “Regional Blueprints.” Furthering the goals of AB 32, SB 375 relies on the regional collaboration by local officials to address California’s goals for reducing the portion of the emissions of greenhouse gases that stems from automobile travel (light duty auto and light duty trucks only). SB 375 requires local metropolitan planning agencies to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. More specifically, SB 375 provides CEQA relief for residential and mixed-use projects that are consistent with an approved SCS or Alternative Planning Strategy (APS). (Urban Crossroads, 2015b, p. 2)

The Southern California Association of Governments (SCAG) is the metropolitan planning agency for the project area. The SCS for the southern California region, including Riverside, Los Angeles, Orange, and San Bernardino counties was prepared by SCAG and approved on April 4, 2012. The SCS incorporates goals to concentrate future development and provide residential and mixed use developments in proximity to transit hubs in order to reduce vehicle miles traveled and, thereby, reduce GHG emissions from light duty auto and light duty trucks. (Urban Crossroads, 2015b, p. 2)

The Governor’s Office of Planning and Research published the guidance document Senate Bill 375 CEQA Provision Flow Charts to assist in understanding SB 375’s CEQA options. Based on Chart 1, since the Project is not consistent with general plan land use designations, density, and building intensity, the Project does not qualify for SB 375 CEQA provisions and the lead agency should use the standard CEQA process. (Urban Crossroads, 2015b, p. 2)

Inconsistency with SB 375 does not in itself constitute a significant impact to GHGs, largely because SB 375 targets a very specific sector for GHG reductions (passenger cars and light-duty trucks). Thus, if a Project’s emissions overall (when considering all sectors) are less than an applicable threshold, then a finding of less than significant can also be made. As such, a Project’s GHG emissions may be found to be less than the identified threshold despite being inconsistent with the land use designations or densities found in a SCS. (Urban Crossroads, 2015b, p. 3)

For purposes of analysis, the applicable threshold utilized for determining significance is whether or not the Project can reduce emissions by 30% from BAU consistent with the County of Riverside’s SOP. This reduction target is also consistent with the overall AB 32 reduction target of approximately 30 percent. It should be noted that SB 375 is a small piece of the State’s overall reduction target pursuant to AB 32. For this Project, although the SB 375-specific targets are not met, an evaluation of the Project’s overall GHG emissions including all emission sectors (including light duty auto and light duty trucks only and other sectors of vehicles) indicates that the Project is consistent with the applicable threshold adopted by the lead agency, and consistent with the overall reduction targets set forth by AB 32. Consequently the Project would result in a less than significant GHG impact. (Urban Crossroads, 2015b, p. 3)

Conclusion

As indicated in the above analysis, the proposed Project would be consistent with, or otherwise would not conflict with, the provisions of AB 32 and SB 375. Additionally, and as demonstrated under the analysis of Threshold 21.a), with the implementation of Mitigation Measures M-GG-1 and M-GG-2 and mandatory compliance with applicable regulations to reduce GHG emissions, the Project would achieve an emissions reduction of 30.49% when compared to the BAU scenario. This reduction meets the target reduction percentage of 30% based on Riverside County Planning Department’s SOP. Other than the provisions of AB 32, SB 375, and the County’s SOP, there are no other plans, policies, or regulations adopted for the purpose of reducing GHG emissions that are applicable to the

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Project. Accordingly, with implementation of Mitigation Measures M-GG-1 and M-GG-2 the Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases, and a less-than-significant impact would occur.

Table EA-21 Project Consistency With Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Pavley Motor Vehicle Standards (AB 1493)	T-1	The project's residents would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Limit High GWP Use in Consumer Products	H-4	The project's residents would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Motor Vehicle Air Conditioning Systems – Reduction from Non-Professional Servicing	H-1	The project's residents would be prohibited from performing air conditioning repairs and required to use professional servicing.
Tire Pressure Program	T-4	Motor vehicles driven by the project's residents would maintain proper tire pressure when their vehicles are serviced.
Low Carbon Fuel Standard	T-2	Motor vehicles driven by project's residents would use compliant fuels in the future.
Water Use Efficiency	W-1	The project includes measures to minimize water use and maximize efficiency.
Green Buildings	GB-1	The project will be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Motor vehicles driven by the project's residents would comply with the leak test requirements during smog checks.
Renewable Portfolios Standard (33% by 2020)	E-3	The electricity used by residents in the proposed project will benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Energy Efficiency Measures (Electricity)	E-1	The project will comply with energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	The project will comply with energy efficiency standards for natural gas appliances and other devices at the time of building construction through compliance of the 2013 Title 24 and CalGreen code.
Greening New Residential and Commercial Construction	GB-1	The project's buildings would meet green building standards that are in effect at the time of design and construction.

(Urban Crossroads, 2015b, Table 1-2)

Mitigation:

M-GG-1 (Condition of Approval 80.Planning.019): Prior to the issuance of building permits, the Project Applicant shall submit energy demand calculations to the County demonstrating that the increment of the Project for which building permits are being requested would achieve a minimum 10% increase in energy efficiencies beyond 2013

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

California Building Code Title 24 performance standards. Representative energy efficiency/energy conservation measures to be incorporated in the Project would include, but would not be not limited to, those listed below (it being understood that the items listed below are not all required and merely present examples; the list is not all-inclusive and other features that would reduce energy consumption and promote energy conservation would also be acceptable):

- Increase in insulation such that heat transfer and thermal bridging is minimized;
- Limit air leakage through the structure and/or within the heating and cooling distribution system;
- Use of energy-efficient space heating and cooling equipment;
- Installation of electrical hook-ups at loading dock areas;
- Installation of dual-paned or other energy efficient windows;
- Use of interior and exterior energy efficient lighting that exceeds then incumbent California Title 24 Energy Efficiency performance standards;
- Installation of automatic devices to turn off lights where they are not needed;
- Application of a paint and surface color palette that emphasizes light and off-white colors that reflect heat away from buildings;
- Design of buildings with "cool roofs" using products certified by the Cool Roof Rating Council, and/or exposed roof surfaces using light and off-white colors;
- Design of buildings to accommodate photo-voltaic solar electricity systems or the installation of photo-voltaic solar electricity systems;
- Installation of ENERGY STAR-qualified energy-efficient appliances, heating and cooling systems, office equipment, and/or lighting products.

M-GG-2 (Condition of Approval 10.Planning.023): To reduce water consumption and the associated energy-usage, the Project will be designed to:

- Reduce outdoor water use by 30%, consistent with Riverside County Ordinance No. 859.
- Reduce indoor water use by 20% consistent with Division 4.3 of the 2013 CalGreen Residential Mandatory Measures.

Monitoring:

M-GG-1 Prior to the issuance of building permits, the energy calculations showing the required energy use reduction shall be submitted to the Riverside County Planning Department for review and approval. Compliance with the energy reduction measures assumed in the calculations shall be verified by Riverside County prior to building permit final inspection.

M-GG-2 Prior to the issuance of building permits, the Project Applicant shall demonstrate that the target reduction in outdoor water demand has been accommodated by the Project's plans.

HAZARDS AND HAZARDOUS MATERIALS Would the project

22. Hazards and Hazardous Materials

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal

☐
☒
☐
☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
of hazardous materials?				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☒	☐	☐
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
e) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

Source: Project Application Materials; Riverside County GIS; *Phase I Environmental Site Assessment and Limited Phase II Subsurface Investigation*, Lake Ranch, Environ, September 2013.

Findings of Fact:

a) The Project has the potential to create a significant hazard to the public or environment based on existing site conditions, construction of the proposed Project, and long-term operation. Each is discussed below.

Impact Analysis for Existing Conditions

An environmental site assessment was conducted for the property by Environ to assess existing conditions (refer to IS/MND Appendix H2). Based on the results of this analysis, Environ identified one "recognized environmental condition" (REC) in connection with the site. Specifically, the Project site has been used for agriculture, including orchards and row crops, since at least the 1930s. While agricultural use has ceased on the southern portions of the site, the northern portions of the site have been used continuously for agriculture since that time. Details regarding the historical use of agricultural chemicals such as pesticides and herbicides are limited. Facility personnel indicated that although only "Round Up" brand weed killer is currently used at the site, insecticides (possibly including sabadilla and another chemical known only as "Saigon") were formerly applied over the growing areas of the site from the air. Less is known about applications of agricultural chemicals early in the site's history. (Environ, 2013, p. 1)

Based on the information reviewed, and the extended agricultural history of the site, Environ performed a limited subsurface investigation of the site concurrent with the Phase I ESA, to assess the potential presence of agricultural chemicals in soil at the site. During the limited Phase II subsurface investigation conducted in August and September 2013, 40 soil borings were drilled and soil samples were collected and selectively analyzed for pesticides, metals, and other compounds (including volatile organic compounds [VOCs] and total petroleum hydrocarbons [TPH]). (Environ, 2013, p. 1)

With the exception of arsenic, all detected metals concentrations were below applicable residential scenario California Human Health Screening Levels (CHHSLs). Arsenic was detected at similarly low

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

concentrations in analyzed samples; the presence of arsenic in the samples is attributed to naturally occurring background concentrations of arsenic in California soils. (Environ, 2013, p. 1)

A number of pesticides were detected in at least one soil sample collected at the site; however, of the pesticides detected, only 4,4-DDE and toxaphene exceeded their respective health based screening levels in at least one sample. Such exceedances were limited to soil samples obtained from 0.5 feet below ground surface (bgs). 4,4-DDE exceeded its residential soil CHHSL (1,600 micrograms per kilogram [$\mu\text{g/kg}$]) in four soil samples. However, detections of 4,4-DDE appear to correspond to a cancer risk of approximately 1×10^{-6} , at the conservative end of the acceptable United States Environmental Protection Agency (EPA) cancer risk range of 10^{-4} to 10^{-6} . Toxaphene exceeded its residential soil CHHSL (460 $\mu\text{g/kg}$) in two soil samples. Detections of toxaphene appear to correspond to a cancer risk of approximately 5×10^{-6} ; again at the conservative end of the acceptable US EPA risk range of 10^{-4} to 10^{-6} . (Environ, 2013, pp. 1-2)

The sample locations where 4,4-DDE and toxaphene were detected in soil at elevated concentrations at 0.5 feet bgs are located in the southwestern portion of the site, an area historically used for lettuce production. It appears that there was pesticide use related to the vegetable growing operations and that residual concentrations of pesticides remain in surface soil in this area. For sampling locations where deeper soil samples were collected at 2 feet bgs and laboratory-analyzed, concentrations of 4,4-DDE and toxaphene decline significantly with increasing depth, indicating that the pesticide residues are limited to surface soils.

Based on the results of the soil samples collected, and because the detections of both compounds are within the acceptable USEPA risk range, it is Environ's opinion that further assessment and/or remediation of the soils is not warranted. However, the presence of residual agricultural chemicals, such as pesticides, may be a potential concern with respect to worker exposure during such activities as grading and foundation excavation work. This is evaluated as a potentially significant impact for which mitigation, in the form of dust control during construction, is required. With appropriate dust control measures during construction (as required by Mitigation Measure M-AQ-2), impacts would be reduced to below a level of significance. (Environ, 2013, p. 2)

There are no other existing site conditions that have the potential to create a significant hazard to the public or environment.

Impact Analysis for Project Construction Activities

Heavy equipment (e.g., dozers, excavators, tractors) would be operated on the subject property during construction of the Project. This heavy equipment would likely be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which is considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, 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 can 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 the proposed Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, state, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited requirements imposed by the EPA, California Department of Toxic Substances Control (DTSC), SCAQMD, and Santa Ana Regional Water Quality Control Board (RWQCB). Because compliance with these regulatory requirements by

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

construction contractors is mandatory, impacts due to hazardous materials used, transported, and/or stored during construction would be less than significant.

Impact Analysis for Long-Term Operational Activities

The Project site would be primarily developed with residential land uses and supporting recreational and open space land uses, which are land uses not typically associated with the transport, use, or disposal of hazardous materials. Although residential land uses may utilize household products that contain toxic substances, such as cleansers, paints, adhesives, and solvents, these products are usually in low concentration and small in amount and would not pose a significant risk to humans or the environment during transport to/from or use at the Project site. Pursuant to State law and local regulations, residents would be required to dispose of household hazardous waste (e.g., batteries, used oil, old paint) at a permitted household hazardous waste collection facility. Accordingly, the Project would not expose people or the environment to significant hazards associated with the disposal of hazardous materials at the Project site. Long-term operation of the Project would not expose the public or the environment to significant hazards associated with the transport, use, or disposal of hazardous materials and impacts would be less than significant.

b) Accidents involving hazardous materials that could pose a significant hazard to the public or the environment would be highly unlikely during the construction and long-term operation of the Project and are not reasonably foreseeable. As discussed above under Threshold 22.a), the transport, use and handling of hazardous materials on the Project site during construction is a standard risk on all construction sites, and there would be no greater risk for upset and accidents than would occur on any other similar construction site. Upon buildout, the Project site would operate as a residential community, which is a land use type not typically associated with the transport, use, or disposal of hazardous materials that could be subject to upset or accident involving the release of hazardous materials into the environment. Accordingly, impacts associated with the accidental release of hazardous materials would be less than significant during both construction and long-term operation of the Project.

c) The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction of the proposed Project, improvements are planned along the Project frontage with McAllister Street and El Sobrante Road, both of which are Circulation Element roadways that likely serve as emergency access for emergency service providers. Both of these roadways would be improved as part of the Project (as explained in MND Section 0.B). During construction of the improvements to these roadways, there is a potential that emergency response times in the local area could be adversely affected. This is evaluated as a potentially significant impact for which mitigation, in the form of a traffic control plan during construction, is required. Implementation of a traffic control plan would ensure that the Project's improvements to these roadways do not significantly affect emergency service response times, thereby reducing impacts to a level below significant.

Under long-term operational conditions, the proposed Project would be required to maintain adequate emergency access for emergency vehicles via El Sobrante Road, McAllister Street, and connecting on-site roadways as required by the County. Furthermore, the Project would not result in a substantial alteration to the design or capacity of any existing public road that would impair or interfere with the implementation of evacuation procedures. Because the Project would not interfere with an adopted emergency response or evacuation plan during long-term operation, no impact would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

d) The nearest school to the Project site is the Lake Mathews Elementary School, located at 12252 Blackburn Road, or approximately 0.35 mile west of the Project site. There are no existing schools located within 0.25 mile of the Project site. Additionally, and according to Riverside County GIS, there are no school facilities planned within 0.25 mile of the Project site (Riverside County, 2015). Accordingly, the Project would have no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and no impact would occur.

e) The Project site and off-site improvement areas are not included on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Environ, 2013, pp. 13-20). Accordingly, no impact would occur.

Mitigation:

Mitigation Measure M-AQ-2 (refer to Issue 6., *Air Quality*, of this Initial Study), which requires measures to control fugitive dust during construction and compliance with SCAQMD Rule 403, shall apply to address potential health impacts to workers during the Project's construction phase.

M-HM-1 (Condition of Approval 10.Planning.024)—Continued vehicular access shall be maintained along El Sobrante Road and/or McAllister Street during construction of improvements to these roadways. Full lane closures are not permitted. Prior to issuance of grading permits, encroachment permits, or improvement plans affecting El Sobrante Road and/or McAllister Street, the Project Applicant shall prepare and submit for review to the Riverside County Transportation Department a Traffic Control Plan that identifies measures to be undertaken to ensure continued vehicular access along El Sobrante Road and/or McAllister Street during construction of improvements to these roadways.

Monitoring:

Monitoring shall occur as specified for Mitigation Measure M-AQ-2 (refer to Issue 6, *Air Quality*, of this Initial Study).

M-HM-1 Prior to issuance of grading permits, encroachment permits, or improvement plans affecting El Sobrante Road and/or McAllister Street, a traffic control plan shall be approved by the Riverside County Transportation Department and shall be implemented throughout the duration of construction activities affecting one or both roadways.

23. Airports

a) Result in an inconsistency with an Airport Master Plan?

☐ ☐ ☐ ☒

b) Require review by the Airport Land Use Commission?

☐ ☐ ☐ ☒

c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

☐ ☐ ☐ ☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Source: General Plan, Figure S-19 (Airport Locations); GIS database (Riverside County, 2014).

Findings of Fact:

a & b) According to Riverside County GIS, the Project site is not located within the airport influence area (AIA) or Master Plan for any private or public airport facility (Riverside County, 2015). The nearest airport to the Project site is the Riverside Municipal Airport, which is a public use airport located approximately 5.7 miles north of the Project site. As such, the Project has no potential to result in an inconsistency with an Airport Master Plan, and the Project would not require review by the Airport Land Use Commission (ALUC). Accordingly, no impact would occur.

c) As indicated above under the discussion of Threshold 23.b), the Project site is not located within the AIA of any public airport or public use airport. As such, the Project has no potential to result in a safety hazard for people residing or working in the area, and no impact would occur.

d) A small, private airstrip is located approximately 0.4 mile south of the Project site (north of Lake Mathews); however, based on aerial photographs from Google Earth, this airstrip has not been operational since at least 2011 – a large yellow “X” is painted at the beginning of the runway (a universal aviation symbol for a runway closed to all operations) and the runway is covered in dirt and used as a construction materials staging area (Google Earth, 2015) The Project site is not located within the vicinity of any active private airports or heliports. Accordingly, implementation of the proposed Project has no potential to result in a safety hazard for people residing or working in the Project area associated with private airstrips and heliports. No impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

24. Hazardous Fire Area

a) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

☐ ☐ ☒ ☐

Source: Lake Ranch Fire Behavior Report and Fuel Modification Design Guidelines

Findings of Fact: The Lake Ranch site is located in a Moderate Fire Hazard Severity Zone in Riverside County and within State Responsibility Area (SRA). State law requires development in SRA within any fire hazard zone to comply with the WUI (Wildland Urban Interface) codes contained in the California Residential Code (Chapter 3, Section R327), California Building Code (Chapter 7A), and California Fire Code (Chapter 49) (Firesafe, 2014, p. 4).

A Fire Behavior Report and Fuel Modification Design Guidelines has been prepared by Firesafe Planning Solutions for the proposed Project, and is included as IS/MND Appendix H1. Firesafe Planning Solutions used a computer software program (BehavePlus Fire Modeling System 5.0.4) to predict the level of wildfire intensity for a fire approaching the proposed Project site (Firesafe, 2014,

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

pages 5-6). This report assesses the risks related to wildland fire and establishes appropriate criteria for a defensible space installation and maintenance program that would reduce the intensity of a wildfire approaching the proposed Project (Firesafe, 2014, p. 3).

Based on the results of the modeling efforts, Firesafe Planning Solutions identified fuel modification requirements that are intended to protect future Project residents and structures from wildland fires even without fire department suppression activities. The Project's recommended fuel modification components are described in IS/MND Section 3.2.2.D and graphically depicted on IS/MND Figure 3-16, and would be enforced pursuant to Condition of Approval 50.FIRE.005. Based on the scientific fire behavior analysis, Firesafe Planning Solutions concludes that compliance with the fuel modification requirements would ensure that exterior portions of future structures or attic spaces would not ignite from the exterior fire exposure associated with a wildland vegetation fire. This is primarily because the greatest fire energy is too far away from the structures due to the low plant densities within the defensible space zones and the proposed fuel modification requirements. Therefore, and assuming compliance with the fuel modification recommendations (as would be assured by pursuant to Condition of Approval 60.FIRE.001), the proposed Project would have a less than significant impact regarding exposure of persons to wildland fires. (Firesafe, 2014, p. 29, pages 5-6)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

HYDROLOGY AND WATER QUALITY Would the project

25. Water Quality Impacts

a) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

☐ ☐ ☒ ☐

b) Violate any water quality standards or waste discharge requirements?

☐ ☐ ☒ ☐

c) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

☐ ☐ ☒ ☐

d) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

☐ ☐ ☒ ☐

e) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

☐ ☐ ☐ ☒

f) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

☐ ☐ ☐ ☒

g) Otherwise substantially degrade water quality?

☐ ☐ ☐ ☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Include new or retrofitted stormwater Treatment Control Best Management Practices (BMPs) (e.g. water quality treatment basins, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g. increased vectors or odors)?	☐	☐	☐	☒

Source: *Hydrology Report*, MDS Consulting, July 31, 2015; *Project Specific Water Quality Management Plan*, MDS Consulting, August 3, 2015; *Urban Water Management Plan*, Western Municipal Water District, 2010.

Findings of Fact:

a) Under existing conditions, and as shown on Plate 1 of the Project's hydrology study (IS/MND Appendix I1), the Project site conveys runoff from an approximately 315-acre area located to the southeast of the Project site, primarily from lands located south of El Sobrante Road. Flows from these off-site areas are combined with flows from the southern portions of the Project site and are conveyed via a natural drainage to an existing drop inlet structure that connects to a 90-inch reinforced concrete pipe (RCP) storm drain. Flows from the northwest portion of the site are conveyed to a man-made drainage ditch that outlets directly onto McAllister Street. Flows from the northeastern portion of the Project site are conveyed off-site to the north, and eventually drain into the existing stream that traverses the extreme northeastern corner of the Project site. (MDS, 2015a, p. 4)

As proposed by the Project, the Project site would be graded to facilitate the construction of 272 single-family residential lots. Additionally, the Project would include two water quality detention basins, a sewage lift station and a 2.2 acre community park. Associated exterior improvements are expected to include asphalt-paved access streets, concrete driveways and pedestrian sidewalks, surface drainage controls, perimeter fencing, common landscaped areas, extensive underground infrastructure, and required storm water quality devices.

As shown previously on IS/MND Figure 3-11, under post-developed conditions, the Project site would be separated into three separate watersheds (Watersheds A, B, and C) that largely correspond to the site's existing watersheds, with flows within Lot 'B' comprising a fourth watershed (Watershed D). Additionally, and as shown previously on IS/MND Figure 3-12, the Project proposes to construct an approximate 7.7-acre Off-Site Basin abutting the southern edge of El Sobrante Road. This basin has been designed to reduce peak runoff flows from approximately 197.9 acres of the approximately 315 acres of off-site watershed that is tributary to the Project site (refer to IS/MND Figure 3-10). The purpose of this detention basin is to off-set increased peak runoff from the developed portions of the Project site. Flows from the detention basin would be conveyed towards the proposed on-site open space in Lot 'B' via a proposed drop inlet structure (that includes a trash rack) that outlets into a 60-inch RCP storm drain to be constructed beneath El Sobrante Road. Please refer to Section 3.1.3.C for a detailed description of the Project's proposed drainage system. (MDS, 2015a)

As indicated in the Project's hydrology study, runoff tributary to the Project site discharges at two locations under existing conditions: along the northern boundary in the northeastern portion of the Project site (i.e., Node 130), where runoff drains towards the north and discharges into the existing stream that traverses the northeastern corner of the Project site; and along the western boundary of the site (Node 995), where flows from the existing drainage traversing the site are conveyed to an existing 84-inch RCP storm drain constructed in association with the residential development to the west of the Project site. (MDS, 2015a)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

With development of the Project site as proposed, runoff in the northern portions of the site would discharge at the same location as occurs under existing conditions (i.e., Node 130), and the post-development runoff rate during peak storm events would be reduced from 70.5 cubic feet per second (cfs) to 67.4 cfs. Runoff from the remaining portions of the Project site ultimately would be conveyed to the drainage within proposed Lot B, where a proposed 90-inch RCP storm drain would be constructed beneath McAllister Street (i.e., Node 630). Node 630 generally occurs in the same location as Node 995, and flows exiting the site to the west would be reduced from 465.3 cfs to 353.7 cfs. (MDS, 2015a, p. 8)

Based on the foregoing discussion, the Project's proposed drainage concept generally would maintain the site's existing drainage patterns. Additionally, because peak flows discharging from the site would be reduced with construction of the Project's proposed extended detention/water quality basins and off-site detention basin, it can reasonably be concluded that Project runoff in the post developed condition would not result in substantial erosion or siltation on- or off-site. Accordingly, impacts would be less than significant and no mitigation would be required.

b) The California Porter-Cologne Water Quality Control Act (Section 13000 ("Water Quality") et seq., of the California Water Code), and the Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act (CWA)) require that comprehensive water quality control plans be developed for all waters within the State of California. The Project site is located within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). Water quality information for the Santa Ana Watershed is contained in the Santa Ana RWQCB's Water Quality Control Plan for the Santa Ana River Basin (as most recently updated in February 2008). This document is herein incorporated by reference and is available for public review at the Santa Ana RWQCB office located at 3737 Main Street, Suite 500 Riverside, CA 92501-3348.

The CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. Water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA. The Project site resides within the Santa Ana Watershed. As detailed in the Project Specific Water Quality Management Plan for the proposed Project (IS/MND Appendix I2), receiving waters for the property's drainage are as follows: Temescal Channel, Santa Ana River (Reaches 1, 2, and 3), Prado Basin Management Zone, Tidal Prism of Santa Ana River and Newport Slough, Pacific Ocean surf zone, and Pacific Ocean offshore. Of the above listed receiving waters Reach 3 of the Santa Ana River is on the EPA Approved 303(d) list of impairments for copper, pathogens, and lead, and Reach 2 of the Santa Ana River is on the 303(d) list for indicator bacteria (MDS, 2015b, p. 7)

A specific provision of the CWA applicable to the proposed Project is CWA Section 402, which authorizes the National Pollutant Discharge Elimination System (NPDES) permit program that covers point sources of pollution discharging to a water body. The NPDES program also requires operators of construction sites one acre or larger to prepare a Stormwater Pollution Prevention Plan (SWPPP) and obtain authorization to discharge stormwater under an NPDES construction stormwater permit.

Impact Analysis for Construction-Related Water Quality

Construction of the proposed Project would involve clearing, grading, paving, utility installation, building construction, and landscaping activities, which would result in the generation of potential water quality pollutants such as silt, debris, chemicals, paints, and other solvents with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of any protective or avoidance measures.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Pursuant to the requirements of the Santa Ana RWQCB and the County of Riverside, the Project would be required to obtain a NPDES Municipal Stormwater Permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. In addition, the Project would be required to comply with the Santa Ana RWQCB's Water Quality Control Plan for the Santa Ana River Basin. Compliance with the NPDES permit and the Water Quality Control Plan for the Santa Ana River Basin involves the preparation and implementation of a Stormwater Pollution Prevention Program (SWPPP) for construction-related activities. The SWPPP is required to specify the Best Management Practices (BMPs) that the Project would be required to implement during construction activities to ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Mandatory compliance with the SWPPP would ensure that the proposed Project does not violate any water quality standards or waste discharge requirements during construction activities. Therefore, with mandatory adherence to the Project's SWPPP, water quality impacts associated with construction activities would be less than significant and no mitigation measures would be required.

Post-Development Water Quality Impacts

As detailed in the WQMP for the proposed Project, potential pollutants associated with development of detached residential land uses include: bacterial indicators, nutrients, pesticides, sediments, trash debris, and oils/grease (MDS, 2015b, p. 18). Onsite runoff would be conveyed and collected by curb and gutter and the Project's proposed storm drain system. Prior to leaving the development, the low flows or first flush from developed areas of the site would be diverted and routed through a detention/water quality basin for water treatment. The water treatment would be consistent with Riverside County Stormwater Quality Best Management Practice Design Handbook (MDS, 2015a, p. 4) (refer to the Project's Hydrology Report in IS/MND Appendix I1).

Furthermore, the Project would be required to implement a Water Quality Management Plan (WQMP), pursuant to the requirements of the applicable NPDES permit. The WQMP is a post-construction management program that ensures the on-going protection of the watershed basin by requiring structural and programmatic controls. The Project's WQMP is included as IS/MND Appendix I2. The WQMP identifies bioretention and biotreatment BMPs. Reclaimed water would be used for the non-potable water demands for the Project. The Project site is divided into five drainage management areas (DMAs). As detailed in the WQMP for the proposed Project, all proposed drainage areas would be treated by biotreatment BMPs, while the drainage within Lot B also would utilize bioretention BMPs (MDS, 2015b, p. 15). Mandatory compliance with the WQMP would ensure that the Project does not violate any water quality standards or waste discharge requirements during long-term operation. Therefore, water quality impacts associated with post-development activities would be less than significant with mandatory WQMP compliance and no mitigation measures would be required.

c) No potable groundwater wells are proposed as part of the Project. The proposed Project would be served with potable water by the WMWD. Water supplies from the WMWD are reliant on imported water from the Metropolitan Water District (MWD), groundwater, and imported water (WMWD, 2010, Page ES-2). Based on review of numerous groundwater databases conducted by Petra Geotechnical, groundwater basins are not located within or adjacent to the site. Based on information presented in the UWMP, WMWD is projected to have sufficient water supplies to meet demand within its service area during all climactic conditions (normal year, single-dry year, and multiple-dry years) until at least 2035. (The year 2035 is the horizon year for the UWMP, meaning the the UWMP's analysis does not extend beyond 2035.) WMWD also is projected to have a water surplus during all climactic conditions until at least 2035. (WMWD, 2010, pp.5.-2 - 5-4) Thus, the Project's demand for

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

domestic water service 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. For more detailed information about domestic water supply, refer to the Utilities and Service Systems discussion below under Issue 45.

Development of the Project would increase impervious surface coverage on the site, which would in turn reduce the amount of direct infiltration of runoff into the ground. However, based on the hydrology studies prepared for the proposed Project, the proposed storm drain system will adequately convey the 100 year storm water within the development and ultimately discharge into either natural watercourses or existing storm drains, where groundwater recharge would continue to occur (MDS, 2015a, p. 8). Thus, with buildout of the Project, the local groundwater levels would not be substantially affected. Therefore, impacts to groundwater supplies and recharge would be less than significant, and mitigation would not be required.

d) As described above in Threshold 25.b) onsite runoff will be conveyed and collected by curb and gutter and storm drain system. Prior to leaving the development, the low flows or first flush would be diverted and routed through a detention/water quality basin for water treatment. The water treatment would be consistent with Riverside County Stormwater Quality Best Management Practice Design Handbook (MDS, 2015a, p. 4). Additionally, as described in Threshold 25.a), the proposed Project would not result in runoff water that would exceed the capacity of existing or planned storm water drainage systems. Based on the analysis presented in the Project's hydrology study (IS/MND Appendix I1), post-development runoff from the site would decrease during 100-year storm events (i.e., from 535.7 cfs under existing conditions to 421.1 cfs under post-development conditions). (MDS, 2015a, p. 8)

With the improvements to be installed by the Project as described in IS/MND Section 3.1.3C, the Project would not create or contribute runoff which would exceed the capacity of existing or planned storm water drainage systems. Additionally, with required adherence to a SWPPP and WQMP as discussed above under Threshold 25.b), the Project would not provide substantial additional sources of polluted runoff. Therefore, less-than-significant impacts would occur and mitigation is not required.

e & f) Per FEMA Map No. 06065C1385G, the proposed Project site is located within FEMA Flood Zone "X" which is defined as "areas determined to be outside the 0.2 percent annual chance floodplain (FEMA, 2014). Accordingly, the proposed Project would not place housing within a 100-year flood hazard area, nor would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows. No impact would occur.

g) Mandatory compliance with the BMPs specified in the Project's WQMP (refer to IS/MND Appendix I2) would ensure that the Project does not result in any other impacts to water quality. There are no conditions associated with the proposed Project that could result in the substantial degradation of water quality beyond what is described above in the responses to Thresholds 25.a), 25.b), or 25.d). Accordingly, no impact would occur.

h) As detailed in the Project's WQMP, the Project would utilize the following source control BMPs: marking all inlets with the words "Only Rain Down the Storm Drain"; maintaining landscaping using minimum of pesticides; and preventing accumulation of litter and debris on sidewalks (MDS, 2015b, p. 23). Thus these water quality BMPs would not result in the detention of water on-site for long periods of time such that vectors (e.g., mosquitoes) or odors could result. Impacts associated with the construction of the Project's BMPs are evaluated throughout this IS/MND, and where necessary, mitigation has been identified to address any impacts associated with their construction.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Accordingly, the Project would not include any new or retrofitted stormwater BMPs that could result in significant environmental effects, and no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

26. Floodplains

Degree of Suitability in 100-Year Floodplains. As indicated below, the appropriate Degree of Suitability has been checked.

NA - Not Applicable ☒ U - Generally Unsuitable ☐ R - Restricted ☐

a) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
b) Changes in absorption rates or the rate and amount of surface runoff?	☐	☐	☒	☐
c) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Dam Inundation Area)?	☐	☒	☐	☐
d) Changes in the amount of surface water in any water body?	☐	☐	☐	☒

Source: *Hydrology Report*. MDS Consulting, July 31, 2015; *Project Specific Water Quality Management Plan*, MDS Consulting, August 3, 2015

Findings of Fact:

a) As described above under the analysis of Threshold 25.a), the Project generally would maintain the site's existing drainage patterns. With development of the Project site as proposed, runoff in the northern portions of the site would discharge at the same location as occurs under existing conditions (i.e., Node 130), and the post-development runoff rate during peak storm events would be reduced from 70.5 cubic feet per second (cfs) to 67.4 cfs. Runoff from the remaining portions of the Project site ultimately would be conveyed to the drainage within proposed Lot B, where a proposed 90-inch RCP storm drain would be constructed beneath McAllister Street (i.e., Node 630). Node 630 generally occurs in the same location as Node 995, and flows exiting the site to the west would be reduced from 465.5 cfs to 353.7 cfs. (MDS, 2015a, p. 8) As such, the Project has no potential to result in flooding on- or off-site, and impacts would be less than significant.

b) Development of the proposed Project would result in the development of more impervious surfaces (in the form of roads, rooftops, sidewalks etcetera), compared to existing conditions. However, as described in Threshold 26a) above, with development of the proposed Project, post-development peak runoff would decrease compared to existing conditions, thus the proposed Project would not increase runoff compared to existing conditions. Additionally, based on review of numerous groundwater databases conducted by Petra Geotechnical, groundwater basins are not located within or adjacent to the site. (Petra, 2014, p. 6; Petra, 2015, p. 4) Accordingly, the Project would not result

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

in significant impacts due to changes in absorption rates or the rate and amount of surface runoff, and impacts would be less than significant.

c) As previously indicated under the discussion and analysis of Threshold 16., a majority of the Project site has a high risk of inundation in the event of failure of the Lake Mathews Dam. Lake Mathews Dam and spillway are located approximately 0.20 kilometers from the southern boundary of the site. A seismically-induced failure of the Lake Mathews Dam facility when the dam basin is filled to capacity could cause extensive flooding across most of the Project site. In recognition of this possibility, the Lake Mathews/Woodcrest Area Plan includes three policies intended to attenuate the risk of dam failure to persons or property. Specifically, Policy LMWAP 14.2 requires adherence to the flood proofing, flood protection requirements, and flood management review requirements of Riverside County Ordinance No. 458, which regulates flood hazards. Additionally, Policy LMWAP 14.3 requires proposed development projects (such as the proposed Project) to undergo review by the Riverside County Flood Control and Water Conservation District. Moreover, County Ordinance No. 457 establishes building standards and codes that apply to development that is subject to inundation. Compliance with the above-reference regulations and policies would ensure that any potential dam inundation hazards associated with future development would be less than significant. However, mitigation has been identified (refer to Mitigation Measures M-GEO-1 and M-GEO-2) to reduce impacts associated with dam inundation to below a level of significance. M-GEO-1 requires the homeowner be informed about their home being located within a dam inundation area through several disclosure mechanisms. M-GEO-1 would ensure that all future residents on the Project site are aware of their home being located in a dam inundation hazard area, the risks associated with the home being located in an inundation zone, and the public service resources in place to help address dam inundation effects in the event the Lake Mathews Dam fails. Therefore, with mandatory compliance to LMWAP policies, and mitigation measure M-GEO-1, the Project's impacts due to being located within a dam inundation hazard area would be less than significant.

d) As described in detail under the analysis of Threshold 25.a), the Project would generally maintain the two discharge points from the Project site towards the west and north. Flows in the southern portions of the Project site would be conveyed to the storm drainage system that occurs in the existing residential community to the west, similar to existing conditions, while flows to the north would be conveyed to the existing drainage in the northeastern portion of the Project site following treatment. Total flows of water exiting the site would not be substantially changed as compared to existing conditions. Furthermore, both drainages that traverse the site are eventually funneled into a storm drainage system, and are conveyed to the Santa Ana River (similar to existing conditions). There are no components of the Project's proposed drainage system that would result in changes in the amount of surface water in any water body. As such, no impact would occur.

Mitigation: Mitigation Measures M-GEO-1 and M-GEO-2 shall apply.

Monitoring: As specified above for Mitigation Measures M-GEO-1 and M-GEO-2.

LAND USE/PLANNING Would the project

27. Land Use

a) Result in a substantial alteration of the present or planned land use of an area?

☐ ☐ ☒ ☐

b) Affect land use within a city sphere of influence and/or within adjacent city or county boundaries?

☐ ☐ ☒ ☐

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Source: General Plan; Riverside County GIS (Riverside County, 2014), Project Application Materials; *City of Riverside General Plan 2020*, City of Riverside, November 2007.

Findings of Fact:

a) Under existing conditions, the northern portions of the Project site are used for citrus production, while the southern portions of the site contain fallow agricultural land. Implementation of the proposed Project would result in the conversion of the site from undeveloped and agricultural uses to that of a master-planned residential community with up to 272 single family homes. Although the change from undeveloped and agricultural uses to residential uses represents a change to the site's existing land use, environmental impacts associated with such conversion have been evaluated throughout this IS/MND and mitigation measures have been imposed where necessary to reduce potentially significant impacts to a level below significance. Accordingly, impacts would be less than significant.

b) The Project site is located in unincorporated Riverside County, within the Sphere of Influence of the City of Riverside (City of Riverside, 2007, Figure LU-1). The City of Riverside General Plan primarily pre-zones the Project site for "A- Agricultural," although the southwestern corner of the site is designated for "C- Commercial" (City of Riverside, 2007, LU-10).

Although the Project would not be consistent with the site's pre-zoning designation of "A- Agricultural" and "C- Commercial," lands to the west of the Project site, which are designated by the City of Riverside General Plan for "HR – Hillside Residential," has been fully developed as a master planned community. Residential dwelling units proposed by the Project would be similar in character to this existing residential community. Additionally, and as discussed under the analysis of Issue 4, the Project would result in less-than-significant impacts to surrounding agricultural lands, assuming mandatory compliance with Riverside County Ordinance No. 625.1.

Accordingly, and based on the foregoing analysis, although the Project would result in a change to the site's planned land uses as shown in the City of Riverside General Plan, such impacts would be less than significant because the proposed change in land uses would not result in, induce, or require changes to surrounding planned land uses and would not result in land use compatibility conflicts. No mitigation is required.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

28. Planning

a) Be consistent with the site's existing or proposed zoning?

☐ ☐ ☐ ☒

b) Be compatible with existing surrounding zoning?

☐ ☐ ☒ ☐

c) Be compatible with existing and planned surrounding land uses?

☐ ☐ ☒ ☐

d) Be consistent with the land use designations and policies of the Comprehensive General Plan (including those of any applicable Specific Plan)?

☐ ☐ ☐ ☒

e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority

☐ ☐ ☐ ☒

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

community)?

Source: General Plan Land Use Element, Staff review, GIS database (Riverside County, 2014), Riverside County Ord. 348

Findings of Fact:

a) Under existing conditions, the 103.62-acre site is zoned for "Light Agriculture, Minimum 10-acre lot sizes," which would allow for residential development at a maximum density of 0.1 du/ac and limited agricultural uses. The 272 residential dwelling units proposed by the Project would not be consistent with this zoning designation. However, the Project proposes a change of zone (CZ 07844) to change the site's zoning designation to "Planned Residential (R-4)" on the southern 76.75 acres of the site and "One-Family Dwellings (R-1)" on the northern approximately 26.87 acres. The R-1 zoning designation allows for residential development on minimum 7,200 square foot (s.f.) lots, while the R-4 designation allows for development of single- or multi-family homes on minimum 3,500 s.f. lots with approval of a development plan. It should be noted that the R-1 and R-4 zoning designations are consistent with the site's LMWAP land use designation of "Medium Density Residential," which applies to a majority of the Project site. Accordingly, and assuming approval of CZ 07844, the Project would be fully consistent with the site's proposed zoning designations of R-1 and R-4, and no impact would occur.

b) Zoning designations surrounding the site include "Residential Agriculture, 5-acre minimum lot size (A-1-5)" and "Residential Agriculture, 5-acre minimum lot size (R-A-5)" to the north; "One-Family Dwellings (R-1)" and "Specific Plan Zone (SP Zone)" to the west; "Watercourse, Watershed and Conservation Areas (W-1)" to the south; and A-1-10 and "Light Agriculture with Poultry (A-P)" to the east. Areas within the R-1 and SP Zones are fully developed with medium density residential uses. The proposed Project, which proposes urban level residential uses on the 103.62-acre site, would be fully compatible with the planned medium density residential land uses within this existing community to the west.

Lands to the north and east of the Project site are zoned A-1-5, A-1-10, and R-A-5, which allow for limited residential development and agricultural production. Although there is a potential for the Project to conflict with agricultural uses that could occur within the A-1-5, A-1-10, and R-A-5 zones, the proposed Project would be required to comply with Riverside County Ordinance No. 625.1. Ordinance No. 625.1 specifies that if any agricultural operation has been in place for at least three years and is not considered a nuisance operation at the time the operation began, no change in surrounding land uses may cause said operation to become a nuisance. Ordinance No. 625 requires notification to future residents at the time homes on-site are purchased that agricultural operations are on-going in the area and that such uses may not be the subject of nuisance complaints.

Mandatory compliance with Ordinance No. 625 would ensure that potential conflicts between proposed residential uses on-site and existing agricultural zoning located north and east of the Project site do not occur, thereby ensuring that impacts would be less than significant. No mitigation beyond mandatory compliance with Ordinance No. 625 would be required.

c) Existing land uses surrounding the Project site include three existing single-family homes located near the northwest corner of the Project site, to the north of which is a mixture of agricultural lands, greenhouses, and several single-family residences and ancillary structures. Remaining areas located north of the Project site consist of undeveloped lands that appear to be regularly disced and a

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

north-south oriented natural drainage. To the west of the Project site is McAllister Street, beyond which is a medium density single-family residential community. To the south of the Project site is El Sobrante Road, beyond which is Lake Mathews. To the east of the Project site are fallow and active agricultural lands, with greenhouses, a single family residence, and multiple sheds occurring near the Project site's southeastern boundary.

As indicated under Threshold 28.b), the medium density residential uses proposed by the Project would be fully compatible with the existing medium density residential community located to the west of the site. Residential uses proposed as part of the Project also would be compatible with the existing large lot residential uses to the north and east. Additionally, mandatory compliance with Ordinance No. 625 would ensure that potential conflicts between proposed residential uses on-site and existing agricultural zoning located north and east of the Project site do not occur. Accordingly, impacts due to a conflict with existing surrounding land uses would be less than significant.

General Plan land use designations surrounding the proposed Project site include the following: Rural Community – Estate Density Residential (RC-EDR)”, “Rural Community – Low Density Residential (RC-LDR)”, and “Community Development – Medium Density Residential (MDR)” to the north; MDR to the west; “Public Facilities (PF)” and “Open Space – Water” to the south; and RC-LDR and MDR to the east.

The Project proposes to develop the 103.62-acre site with medium density residential land uses. The residential land uses proposed as part of the Project would serve as an extension of the existing medium density residential uses that occur to the west of the site, and also would provide a transition to the RC-EDR and RC-LDR land uses planned to the east and north of the Project site. Because the Project area is planned by the Riverside County General Plan for residential uses at varying densities, development of the Project site with residential uses would not result in a conflict with the planned land uses in the area. Accordingly, no impact would occur.

d) The Project site is not located within the boundaries of any Specific Plan. The Project includes a request for a General Plan Amendment to change the subject property's CR land use designation to MDR. Upon approval of GPA 01127, the Project would be consistent with the land use designations of the General Plan and LMWAP.

The proposed Project is located within the LMWAP's El Sobrante Policy Area. The purpose of the El Sobrante Policy Area is to address the infrastructure capacity within the policy area with an emphasis on preservation of the area's rural lifestyle. The Project's consistency with the El Sobrante Policy Area policies is discussed below. It should be noted that in order for a policy inconsistency to be significant under CEQA, the inconsistency must result in a significant environmental effect.

***LMWAP 1.1:** Require the provision of adequate and available infrastructure to support development. To sustain the rural lifestyle found within the area, while still providing an acceptable level of service on local roadways, the total number of dwelling units within the Policy Area shall not exceed an additional 1,500 dwelling units. The circulation system, which would support the development of these additional dwelling units and which would, in part, be funded by their development, includes the following roadway improvements: the McAllister Street/Dufferin Avenue Loop and the construction of a new connection ("A" Street) between McAllister Street/Dufferin Avenue Loop and Van Buren Boulevard, south of Dufferin Avenue. In addition to these improvements, other circulation connections between the Policy Area and the adjacent City of Riverside would be closed. These closures would direct high traffic volumes away from*

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

rural residential and green belt streets and toward more appropriate thoroughfares. Limiting the number of dwelling units within the Policy Area will help to maintain acceptable levels of service on local roadways both within the County and adjacent green belt areas of the City of Riverside. Limiting the number of dwelling units will also contribute to the continuation of the rural lifestyle enjoyed by area residents.

The proposed Project consists of a General Plan Amendment (GPA01127), Change of Zone (CZ07844) and Tentative Tract Map (TR36730) to provide for the development of 272 single family homes.

When the General Plan Update was approved in 2003, development in the El Sobrante Policy Area was sparse, although several subdivisions and land entitlements had previously been approved. Specifically, two small-lot tracts (McAllister and Perkins) were recorded and together had the legal right to 312 dwelling units. In addition, the Lake Mathews Golf and Country Club Specific Plan (SP No. 325) was approved, with legal right to 295 dwelling units (SP No. 325 has since been renamed Citrus Heights I). In addition, in 2003 there were 97 existing legal lots within the Policy Area that were of a size and configuration that could accommodate the construction of one (1) single family home by right. 704 residential dwelling units could have been constructed within the Policy Area by right in 2003. These 704 dwelling units are the base number to which the 1,500 additional dwelling units are intended to be added by LMWAP Policy 1.1. Thus, the total number of residential dwelling units allowed within the El Sobrante Policy Area is 2,204 units.

Since 2003, Riverside County has approved one tentative tract map (TTM) in the Policy Area (TTM No. 36390 associated with SP 325 Amendment No. 1 (Citrus Heights I). Two TTMs are currently proposed in the Policy Area (TTM No. 36475 (Citrus Heights II) and TTM No. 36730 (Lake Ranch)). These TTMs would collectively result in the development of 786 residential dwelling units. Of these, 304 dwelling units (295 for Citrus Heights I, 4 for Citrus Heights II, and 5 for Lake Ranch) had the legal right to be implemented in 2003. Accordingly, buildout in accordance with these approved and proposed TTMs would result in an additional 482 dwelling units within the Policy Area. The 482 approved and proposed dwelling unit allocations are part of the "additional 1,500 dwelling units" allowed by Policy 1.1. Thus, 1,018 dwelling units are yet to be allocated as follows: 1,500 additional units – 482 units approved and proposed for allocation = 1,018 units remain to be allocated.

If all parcels in the Policy Area were further subdivided to achieve the maximum residential development densities allowed by the County's General Plan, an additional 867 dwelling units would be allocated within the Policy Area. All existing, current, proposed, and potential development within the Policy Area would be fully consistent with the dwelling unit restrictions specified by Policy LMWAP 1.1, with a margin of 151 units. Any future allocations of the 151 units remaining would require a General Plan Amendment.

Therefore, implementation of the proposed Project would not violate or otherwise preclude the implementation of LMWAP Policy 1.1.

LMWAP 1.2 *Within the area depicted as Medium Density Residential, overall density shall not exceed three (3) dwelling units per acre.*

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

The Project proposes to develop the portions of the Project site designated as MDR with residential land uses at an overall density of 2.62 du/ac, which is less than 3.0 du/ac. Accordingly, the Project would be fully consistent with Policy LMWAP 1.2.

LMWAP 1.3 *Coordinate with local agencies to ensure adequate service provision for all development within the Policy Area.*

The proposed Project would be developed in coordination with local service providers and, therefore, would be consistent with LMWAP 1.3 (refer to the analysis under the *Public Services and Utilities and Service Systems* issue areas, below).

LMWAP 1.4 *Coordinate development strategies with the City of Riverside.*

This policy applies to the County of Riverside and is not applicable to individual development projects. However, the County of Riverside did coordinate with the City of Riverside with regards to the Project's potential impacts to circulation and traffic.

LMWAP 1.5 *Encourage the use of Specific Plans to implement the land use designations identified within the Policy Area.*

LMWAP 1.5 is a recommendation and not a formal requirement. The Project does not propose a Specific Plan. The Project would not prevent implementation of LMWAP 1.5.

LMWAP 1.6 *Encourage clustering of dwelling units when it would avoid the development of areas constrained by physical features or sensitive resources. Encourage clustering in areas designated for Low Density Residential uses (One-half acre minimum lot size) rather than areas designated for Very Low Density Residential uses (1 acre minimum lot size) or Estate Density Residential uses (2 acre minimum lot size), except where Very Low Density Residential-designated properties consisting of at least 300 acres and processed through a Specific Plan offer significant public recreational and/or areawide circulation benefits.*

Where clustering is allowed, minimum pad size shall not be less than 8,000 square feet. However, for projects featuring public golf courses, a minimum pad size of 7,200 square feet will be allowed on a minimum lot size of 8,500 square feet. This pad size exception may only occur adjacent to golf courses.

The El Sobrante Policy Area encourages clustering of dwelling units to avoid development of areas constrained by physical features or sensitive resources. Clustering is specifically encouraged within Low Density Residential Areas rather than Very Low Density Residential or Estate Density Residential areas, although it does not prohibit clustering in Very Low Density Residential or Estate Density Residential areas. Portions of the Project site have been designed to cluster residential dwelling units in areas outside of environmentally sensitive areas – notably, the drainage located in the northeastern portion of the Project site. The Tentative Tract Map proposes to cluster development within the Low Density-Residential (22.5 acres), and Estate Density-Residential (2.3 acres) portion of the site to avoid the drainage area located in the northeastern portion of the project site. Where clustering is allowed, lots shall have a minimum pad size of 8,000 square feet. Clustering would technically not occur within the Medium Density-Residential portion of the site since there are no stated minimum lot sizes for this designation and development within this area would comply with the applicable density criteria.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Lots within the Low Density-Residential and Estate Density-Residential areas where clustering would occur have a minimum lot size of 10,912 square feet and a minimum pad size of 10,000 square feet. Accordingly, the Project would be consistent with Policy LMWAP 1.6.

~~The Project site is designated for RC-EDR (2.3 acres), Rural Community Low Density Residential (22.5 acres), Community Development - Medium Density (62.6 acres), and Community Development - Commercial Retail (11.6 acres) land uses. The portions of the Project designated for RC - LDR and RC - EDR land uses have been designed to cluster residential dwelling units in areas outside of environmentally sensitive areas - notably, the drainage located in the northeastern portion of the Project site. Accordingly, the Project would be consistent with Policy LMWAP 1.6.~~

LMWAP 1.7 Development shall be sensitive to and retain the unique topographical features within and adjacent to the planning area.

The Project site does not contain any unique topographic features. The majority of the site is characterized by undulating terrain, with some hillside topography that is not unique to the Project site. The Project would grade the majority of the 103.62-acre Project site and retain the remaining areas as natural open space. Although the natural topography of the graded areas would be modified to accommodate building pads for residential development, the Project design is sensitive to the natural topography, in conformance with LMWAP 1.7.

LMWAP 1.8 Require that development on hillsides blend with the natural surroundings through architecture, the use of appropriate construction materials and colors, and the retention of natural vegetation.

The Project's grading concept is sensitive to the natural terrain, and manufactured slopes would be constructed and landscaped to blend with the natural surroundings to the extent feasible. Future development on the Project site would be required to comply with the *Countywide Design Guidelines* and would utilize construction materials and colors that complement the natural surroundings, including natural vegetation. The Project would be consistent with LMWAP 1.8.

LMWAP 1.9 Restrict hillside development and grading in accordance with policies found in the Open Space, Habitat & Natural Resources section and Hillside Development and Slope section of the Land Use Element and the Scenic Resources section of the Multipurpose Open Space Element.

The Riverside County Planning Department reviewed the Project's Development Plan and determined that the Project would not conflict with any policies of the Land Use and Open Space elements of the General Plan. As such, the Project would be consistent with LMWAP 1.9.

LMWAP 1.10 Encourage open space and recreational amenities.

The Project would accommodate a total of 15.34 acres of common and natural open space on-site. The Project also accommodates a 2.18-acre park site. Accordingly, the Project would be consistent with LMWAP 1.10.

As demonstrated above, the Project would be consistent with the LMWAP's El Sobrante Policy Area. The proposed Project also would not conflict with any other policies of the General Plan or the

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	--------------------------------------	--	------------------------------------	--------------

LMWAP. Based on the foregoing analysis, there are no components of the Project that would conflict with any applicable policy of the General Plan or LMWAP. Accordingly, no impact would occur.

e) Under existing conditions, an established community exists to the west of the site, while several rural residential uses also occur to the north and east of the Project site. There are no components of the Project that would physically disrupt or divide any of these existing communities. Moreover, with buildout of the Project's proposed residential uses, public access would be afforded via public roads to be constructed on-site and immediately adjacent to the site. Accordingly, the proposed Project would not disrupt or divide the physical arrangement of an established community, and no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

MINERAL RESOURCES Would the project

29. Mineral Resources

a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?

☐ ☐ ☐ ☒

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

☐ ☐ ☐ ☒

c) Be an incompatible land use located adjacent to a State classified or designated area or existing surface mine?

☐ ☐ ☐ ☒

d) Expose people or property to hazards from proposed, existing or abandoned quarries or mines?

☐ ☐ ☐ ☒

Source: General Plan, Figure OS-5 (Mineral Resources)

Findings of Fact:

a & b) Based on available information, the Project site has never been the location of mineral resource extraction activity. No mines are located on the property. According to Figure OS-5 of the Riverside County General Plan, the Project site and off-site impact areas are designated within Mineral Resources Zone 3 (MRZ-3) pursuant to the Surface Mining and Reclamation Act of 1975 (SMARA). MRZ-3 is defined by the State of California Department of Conservation SMARA Mineral Land Classification Project as "Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined." Furthermore, the Project site is not identified as an important mineral resource recovery site by the County General Plan. Accordingly, the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State, nor would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impact would occur. (Riverside County, 2003a)

c & d) The Project site is not located within or near any lands that are classified as Mineral Resources Zone 2 (MRZ-2), which are areas known to have mineral resources deposits. Additionally, lands abutting the Project site do not include any State classified or designated areas, and there are

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

no known active or abandoned mining or quarry operations on lands abutting the proposed Project site. Accordingly, no impact would occur. (Riverside County, 2003a)

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

NOISE Would the project result in:

Definitions for Noise Acceptability Ratings

Where indicated below, the appropriate Noise Acceptability Rating(s) has been checked.

NA - Not Applicable

A - Generally Acceptable

B - Conditionally Acceptable

C - Generally Unacceptable

D - Land Use Discouraged

30. Airport Noise

a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?

☐ ☐ ☐ ☒

NA ☒ A ☐ B ☐ C ☐ D ☐

b) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

☐ ☐ ☐ ☒

NA ☒ A ☐ B ☐ C ☐ D ☐

Source: General Plan, Figure S-19 (Airport Locations); Riverside County GIS (Riverside County, 2013); *Riverside County Airport Land Use Compatibility Plan, Volume I*, Riverside County ALUC, October 14, 2005.

Findings of Fact:

a) According to Riverside County GIS, the Project site is not located within the airport influence area (AIA) or Master Plan for any private or public airport facility (Riverside County, 2015). The nearest airport to the Project site is the Riverside Municipal Airport, which is a public use airport located approximately 5.7 miles north of the Project site. According to Map RI-3 of the Riverside County Airport Land Use Compatibility Plan Policy Document, the Project site is located well outside of the 55 Community Noise Equivalent Level (CNEL) noise contour for the Riverside Municipal Airport. As such, future residents of the proposed Project would not be exposed to excessive noise levels associated with airport operations. Accordingly, no impact would occur.

b) A small, private airstrip is located approximately 0.4 mile south of the Project site (north of Lake Mathews); however, based on aerial photographs from Google Earth, this airstrip has not been operational since at least 2011 – a large yellow “X” is painted at the beginning of the runway (a universal aviation symbol for a runway closed to all operations) and the runway is covered in dirt and used as a construction materials staging area (Google Earth, 2015). The Project site is not located within the vicinity of any active private airports or heliports. Accordingly, implementation of the proposed Project has no potential to expose people residing or working in the project area to excessive noise levels. No impact would occur.

Mitigation: No mitigation is required.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Monitoring: No monitoring is required.

31. Railroad Noise

NA ☒	A ☐	B ☐	C ☐	D ☐	☐	☐	☐	☒
--	----------------------------	----------------------------	----------------------------	----------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------

Source: General Plan, Figure C-1 (Circulation Plan); Riverside County GIS (Riverside County, 2013), On-site Inspection

Findings of Fact: The Project site is not located near any railroad tracks and no aspect of the proposed Project involves railroad use or rail transport. The nearest rail line occurs approximately 3.1 miles northwest of the Project site, and is too far from the Project area to generate substantial noise affecting future Project residents. (Google Earth, 2015) Accordingly, no railroad-related noise impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

32. Highway Noise

NA ☒	A ☐	B ☐	C ☐	D ☐	☐	☐	☐	☒
--	----------------------------	----------------------------	----------------------------	----------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------

Source: On-site Inspection, Project Application Materials; Riverside County GIS (Riverside County, 2013).

Findings of Fact: The nearest highway to the proposed Project site is SR-91, located approximately 3.0 miles north of the site. Due to distance, intervening development, and topography, vehicular traffic along SR-91 would not expose future on-site residents to noise levels in excess of the County General Plan standards and no impact would occur. Please refer also to Threshold 34.c) below for a discussion of the Project's potential to expose future Project residents to excessive noise levels associated with nearby roadways, and for a discussion of the Project's potential to create or contribute to substantial vehicular-related noise in off-site locations.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

33. Other Noise

NA ☒	A ☐	B ☐	C ☐	D ☐	☐	☐	☐	☒
--	----------------------------	----------------------------	----------------------------	----------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------

Source: Project Application Materials, Riverside County GIS (Riverside County, 2013).

Findings of Fact: There are no other known sources of noise within the Project vicinity that could expose future Project residents to noise levels above the County General Plan standards. Accordingly, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
34. Noise Effects on or by the Project				
a) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
b) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
c) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
d) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐

Source: Riverside County General Plan, Table N-1 ("Land Use Compatibility for Community Noise Exposure"); Project Application Materials, Lake Ranch (Tract No. 36730) Noise Impact Analysis County of Riverside, Urban Crossroads, Inc., December 11, 2014.

Findings of Fact:

a) The Project proposes to develop the site with single-family detached dwelling units. As discussed below under Threshold 34.c), with implementation of project design features, the proposed Project would not create a substantial permanent increase in ambient noise levels due to future traffic generated by the proposed Project. The analysis presented under Threshold 34.c) concludes that the Project would have less than significant near term construction-phase impacts and less than significant on- and off-site traffic impacts with the implementation of mitigation measures. Refer the analysis under Threshold 34.c) for more information.

b) To assess the short-term construction noise impacts ten sensitive receiver locations were identified, as shown on Exhibit 8-A of the Noise Impact Analysis (IS/MND Appendix J). 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 homes, mobile home parks, churches, libraries, and recreation areas. Sensitive receivers in the vicinity of the Project site include the single-family residential homes at locations R1 through R10. The closest noise-sensitive receiver is represented by location R8, where an existing residential home is located approximately 94 feet west of the Project site. A description of the location of noise sensitive receptors R1 through R10 is provided below (Urban Crossroads, 2014a, p. 51):

- R1: Located approximately 471 feet north of the Project site, R1 represents existing residential homes east of McAllister Street.
- R2: Location R2 represents the existing residential home located roughly 1,178 feet west of the northern Project site boundary across McAllister Street.
- R3: Location R3 represents the existing residential home situated along McAllister Street, approximately 629 feet northwest of the Project site boundary.
- R4: Location R4 represents the existing residential home situated approximately 481 feet north of the Project site.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- R5: At a distance of approximately 173 feet north of the Project site, location R5 represents an existing residential home.
- R6: At a distance of 292 feet north of the Project site, R6 describes the residential home located east of McAllister Street.
- R7: Location R7 represents the existing residential home located approximately 101 feet west of the Project site across McAllister Street.
- R8: Located approximately 94 feet west of the Project site across McAllister Street, R8 represents the nearest sensitive residential receiver.
- R9: Location R9 represents the existing residential home located north of El Sobrante Road and approximately 274 feet east of the Project site.
- R10: Located approximately 934 feet southeast of the Project site and north of El Sobrante Road, R10 represents an existing residential home.

Project construction is expected to occur in the following eight stages:

- Demolition
- Grading and Import
- Sewer, Water, and Storm
- Building Construction
- Street Improvements
- Architectural Coating
- Common Area Landscaping
- Hard Rock Blasting

The County of Riverside has established limits to the hours of operation regarding construction. Section 9.52.020 of the County's Noise Regulation ordinance indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. Neither the County's General Plan nor Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers (Urban Crossroads, 2014a, p. 65).

Calculations of the Project construction noise level impacts at the ten noise receiver locations were completed as part of the noise impact analysis for the proposed Project. The analysis shows that the highest construction noise level impacts would occur during grading and blasting construction activities at the edge of the Project site. The construction noise levels are expected to range from 46.6 to 79.1 dBA Leq (Urban Crossroads, 2014a, p. 65). The construction noise analysis shows that the nearby sensitive residential receivers would likely experience a significant, temporary/periodic increase above the existing ambient noise due to Project construction activities. However, as described below, with implementation of Mitigation Measure M-N-1, impacts would be reduced to a less than significant level.

The construction of the proposed Project would include blasting of hard rock areas, which is a major source of potential noise impacts to nearby residential receivers. Based on the FHWA's RCNM, the estimated noise levels due to blasting activities at the Project site at each receiver location would range from 66.6 to 83.5 dBA Lmax. Rock blasting activities will be limited during the permitted hours for construction activity between 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May, as required by

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

the County of Riverside Code of Ordinances. The construction noise analysis shows that the highest construction noise levels would occur during grading and blasting construction activities at the edge of the Project site (Urban Crossroads, 2014a, p. 62)

Although construction-related noise impacts would be less than significant due to the timing restrictions specified by Municipal Code Section 9.52.020, Mitigation Measure M-N-1 is nonetheless proposed to reduce the noise levels due to blasting activities. Mitigation Measure M-N-1 includes measures such as the use of alternatives to explosives within 200 feet of nearby residential receivers, and the incorporation of blasting mats. Since two receiver locations (R5 and R7) identified in the noise impact analysis are within 200 feet of the proposed hard rock blasting areas, the blasting operations at these hard rock locations are required to be conducted using alternative methods to explosives, thereby further reducing the noise levels at receiver locations R1 to R7. With implementation of Mitigation Measure M-N-1 and mandatory compliance with Municipal Code Section 9.52.020, impacts during construction of the proposed Project would be less than significant. (Urban Crossroads, 2014a, p. 65)

c) The proposed Project has the potential to expose nearby sensitive receptors to noise levels in excess of the County standard. Sensitive receptors within the immediate vicinity of the Project site include existing residential uses to the west, northwest, and east. The Project has the potential to result in noise levels in excess of the County's standard during Project construction activities, under long-term conditions due to the potential exposure of future on-site residents to traffic-related noise from nearby streets, and under long-term conditions due to the potential for Project-related traffic to create or contribute to noise levels along off-site streets. Each of these conditions is discussed below.

Near-Term Construction-Related Noise

As noted in the discussion and analysis of Threshold 34.b), above, and Threshold 34.d), below, with implementation of Mitigation Measure M-N-1 and mandatory compliance with Section 9.52.020 of the County's Noise Regulation ordinance, and impacts during construction would be less than significant.

On-Site Traffic-Related Noise Impacts

A Noise Impact Analysis technical report (IS/MND Appendix J) was prepared to evaluate the Project's potential to expose future on-site residents to noise levels exceeding the County's interior and exterior noise standards. The County of Riverside General Plan Noise Element specifies the maximum noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. For noise sensitive residential uses the exterior noise levels shall not exceed 65 dBA CNEL. In addition, the County requires that residential developments achieve an indoor noise standard of 45 dBA CNEL with windows closed consistent with the California Building Code requirements (Urban Crossroads, 2014a, p. 22).

The estimated roadway noise contributions 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

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

"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, 2014a, p. 27). Refer to Section 5 of the Project-specific Noise Impact Analysis (IS/MND Appendix J) for a description of the various inputs used in the modeling of future on-site noise levels.

Based on the County of Riverside General Plan Circulation Element, Table C-1, El Sobrante Road is classified as a 4-lane Arterial Highway, and McAllister Street is classified as a 2-lane Collector Street. To predict the future on-site noise environment at the Project site, the maximum two-way traffic volumes at a Level of Service "C" identified in the Circulation Element, Figure C-3, were utilized. The traffic volumes shown in Table EA-22, *On-Site Roadway Parameters*, reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate Project Design Features that address the worst-case future conditions. For the purposes of this analysis, hard site conditions were used to analyze the potential on-site traffic noise impacts for the Project study area. Hard site conditions account for the sound propagation loss over a reflective surface between the source and the receiver (Urban Crossroads, 2014a, p. 30).

Table EA-22 On-Site Roadway Parameters

Roadway	Lanes	Classification ¹	Maximum Two-Way Traffic Volume (LOS C) ²	Speed Limit (mph) ³	Site Conditions
El Sobrante Rd.	4	Arterial	28,700	40	Hard
McAllister St.	2	Collector	10,400	40	Hard

¹ Road classifications based upon the County of Riverside General Plan Circulation Element, August 2013.

² Source: County of Riverside General Plan Circulation Element, Figure C-3.

³ Source: County of Riverside Office of Industrial Hygiene (Appendix 5.1).

(Urban Crossroads, 2014a, Table 5-5)

Table EA-23, *On-Site Distribution of Traffic Flow by Vehicle Type (Vehicle Mix)*, presents the total traffic flow distributions (vehicle mixes) obtained from the County of Riverside Office of Industrial Hygiene noise study requirements. 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 (Urban Crossroads, 2014a, p. 30).

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 lot in relationship to El Sobrante Road and McAllister Street. The site plan was used to identify the relationship between the roadway centerline elevation, the pad elevation and the centerline distance to the noise barrier, and the building façade. The exterior noise levels at the backyard receivers were placed five feet above the pad elevation and ten feet from the proposed barrier location or at the proposed building façade, whichever is greater (Urban Crossroads, 2014a, p. 31)

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Table EA-23 On-Site Distribution of Traffic Flow by Vehicle Type (Vehicle Mix)

Roadway	Classification ¹	Total % Traffic Flow ²			Total
		Autos	Medium Trucks	Heavy Trucks	
El Sobrante Rd.	Arterial	92.00%	3.00%	5.00%	100%
McAllister St.	Collector	97.42%	1.84%	0.74%	100%

¹ Road classifications based upon the County of Riverside General Plan Circulation Element, August 2013.

² Source: County of Riverside Office of Industrial Hygiene (Appendix 5.1).

(Urban Crossroads, 2014a, Table 5-6)

Future vehicle noise from El Sobrante Road and McAllister Street is the principal source of community noise that will impact the Project site. The Project will also experience some background traffic noise impacts from the Project's internal roads, however due to the distance, topography and low traffic volume/speeds, traffic noise from these roads would not make a significant contribution to the noise environment. Mitigation Measures have been identified (refer to Mitigation Measures M-N-2 and M-N-3) to reduce the exterior and interior noise levels to satisfy the County of Riverside transportation related CNEL noise criteria for residential development.

Exterior Noise Levels

Using the FHWA traffic noise prediction model, the expected future exterior noise levels for individual lots were calculated. Table EA-24, *Future On-Site Exterior Noise Levels*, below presents a summary of future exterior noise level impacts in the outdoor living areas (backyards). The on-site traffic noise level impacts indicate that the lots adjacent to El Sobrante Road and McAllister Street would experience uncontrolled exterior noise levels ranging from 58.4 to 72.5 dBA CNEL (Urban Crossroads, 2014a, p. 45)

To satisfy the County of Riverside 65 dBA CNEL exterior noise level standards for single-family residential development, the planned 6-foot high noise barriers for lots adjacent to McAllister Street and El Sobrante Road are required. With the planned noise barriers shown on Exhibits ES-A and ES-B of the Noise Impact Analysis for the proposed Project, and assuming implementation of Mitigation Measure M-N-2, the future exterior noise levels with mitigation would range from 52.9 to 64.4 dBA CNEL. The noise analysis shows that the recommended noise barriers would satisfy the County of Riverside 65 dBA CNEL exterior noise level standards (Urban Crossroads, 2014a, p. 45). Thus, no additional mitigation measures are warranted.

Interior Noise Levels

To ensure that interior noise levels of proposed residential homes comply with the County of Riverside 45 dBA CNEL interior noise standards, future noise levels were calculated at the first and second floor building facades.

The interior noise level is the difference between the predicted exterior noise level at the building façade and the noise reduction of the structure. Typical building construction provides a noise level reduction 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

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assemblies free of cut outs or openings (Urban Crossroads, 2014a, p. 47).

Table EA-24 Future On-Site Exterior Noise Levels

Lot Number	Roadway	Uncontrolled Noise Level (dBA CNEL)	Noise Level With Project Design Features (dBA CNEL)	Barrier Height (Feet)	Top of Barrier Elevation (Feet)
4	El Sobrante Rd.	68.0	61.2	6.0'	1312'
5	El Sobrante Rd.	63.5	58.2	6.0'	1316'
9	El Sobrante Rd.	63.3	57.7	6.0'	1318'
18	El Sobrante Rd.	66.6	61.1	6.0'	1316'
19	El Sobrante Rd.	58.4	64.3	6.0'	1316'
84	El Sobrante Rd.	62.3	63.3	6.0'	1322'
85	El Sobrante Rd.	72.3	64.4	6.0'	1322'
88	El Sobrante Rd.	72.5	64.4	6.0'	1324'
90	El Sobrante Rd.	72.4	64.3	6.0'	1325'
92	El Sobrante Rd.	71.9	63.9	6.0'	1326'
93	El Sobrante Rd.	71.7	63.7	6.0'	1327'
197	McAllister St.	64.3	56.6	6.0'	1314'
194	McAllister St.	64.2	56.3	6.0'	1312'
191	McAllister St.	64.0	56.1	6.0'	1310'
190	McAllister St.	64.0	55.9	6.0'	1310'
36	McAllister St.	59.0	52.9	6.0'	1307'
33	McAllister St.	59.2	52.9	6.0'	1309'
31	McAllister St.	59.8	53.3	6.0'	1310'
10	McAllister St.	60.0	53.9	6.0'	1305'
1	McAllister St.	65.5	58.8	6.0'	1306'
3	McAllister St.	65.5	57.0	6.0'	1308'

(Urban Crossroads, 2014a, Table 7-1)

To provide the necessary interior noise level reduction, Table EA-25 *First Floor Interior Noise Impacts*, and Table EA-26, *Second Floor Interior Noise Impacts*, indicate that residential homes facing El Sobrante Road and McAllister Street would require a windows closed condition and a means of mechanical ventilation (e.g. air conditioning). Table EA-25 shows that the future uncontrolled noise levels at the first floor building façade are expected to range from 52.8 to 66.9 dBA CNEL. The first floor interior noise level analysis shows that the County of Riverside 45 dBA CNEL interior noise level standards can be satisfied using standard windows with a minimum STC rating of 27. Table EA-26 shows that the future noise levels at the second floor building façade are expected to range from 57.7 to 72.1 dBA CNEL, and windows with a minimum STC rating of 27 are expected to satisfy the County of Riverside's 45 dBA CNEL interior noise level standards for lots 1 to 5, 8 to 10, 18, 19, 30 to 36, and 189 to 197 adjacent to El Sobrante Road and McAllister Street. Lots 84 to 93 adjacent to El Sobrante Road would require upgraded second floor windows with a minimum STC rating of 31.

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-25 First Floor Interior Noise Impacts

Lot	Noise Level at Façade ¹	Required Interior Noise Reduction ²	Estimated Interior Noise Reduction ³	Upgraded Windows ⁴	Interior Noise Level ⁵
4	63.1	18.1	25	No	38.1
5	60.1	15.1	25	No	35.1
9	59.7	14.7	25	No	34.7
18	63.2	18.2	25	No	38.2
19	64.4	19.4	25	No	39.4
84	65.9	20.9	25	No	40.9
85	66.9	21.9	25	No	41.9
88	66.9	21.9	25	No	41.9
90	66.8	21.8	25	No	41.8
92	66.4	21.4	25	No	41.4
93	66.2	21.2	25	No	41.2
197	55.8	10.8	25	No	30.8
194	55.4	10.4	25	No	30.4
191	55.1	10.1	25	No	30.1
190	54.9	9.9	25	No	29.9
36	52.8	7.8	25	No	27.8
33	52.8	7.8	25	No	27.8
31	53.1	8.1	25	No	28.1
10	53.9	8.9	25	No	28.9
1	58.2	13.2	25	No	33.2
3	57.2	12.2	25	No	32.2

Notes:

All values shown in Table EA-25 are dBA CNEL.

1 Exterior noise level at the façade 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 with a minimum STC rating of greater than 27?

5 Estimated interior noise level with minimum STC rating for all windows.
(Urban Crossroads, 2014a, Table 7-2)

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-26 Second Floor Interior Noise Impacts

Lot	Noise Level at Façade ¹	Required Interior Noise Reduction ²	Estimated Interior Noise Reduction ³	Upgraded Windows ⁴	Interior Noise Level ⁵
4	66.0	21.0	25	No	41.0
5	67.1	22.1	25	No	42.1
9	66.6	21.6	25	No	41.6
18	64.0	19.0	25	No	39.0
19	57.7	12.7	25	No	32.7
84	70.9	25.9	29	Yes	41.9
85	72.0	27.0	29	Yes	43.0
88	72.1	27.1	29	Yes	43.1
90	72.1	27.1	29	Yes	43.1
92	71.7	26.7	29	Yes	42.7
93	71.4	26.4	29	Yes	42.4
197	63.8	18.8	25	No	38.8
194	63.6	18.6	25	No	38.6
191	63.5	18.5	25	No	38.5
190	63.5	18.5	25	No	38.5
36	58.8	13.8	25	No	33.8
33	59.0	14.0	25	No	34.0
31	59.6	14.6	25	No	34.6
10	59.8	14.8	25	No	34.8
1	64.8	19.8	25	No	39.8
3	64.8	19.8	25	No	39.8

Notes:

All values shown in Table EA-26 are dBA CNEL.

- 1 Exterior noise level at the façade 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 Estimated interior noise reduction with the recommended STC ratings.
- 4 Does the required interior noise reduction trigger upgraded with a minimum STC rating of greater than 27?
- 5 Estimated interior noise level with the recommended STC rating for all windows.
(Urban Crossroads, 2014a, Table 7-3)

The noise analysis shows that with the incorporation of Mitigation Measure M-N-3, the Project would satisfy the County of Riverside 45 dBA CNEL interior noise level standards for single-family residential development. A final noise study shall be prepared prior to obtaining building permits for the Project. This report would finalize the Project Design Features proposed in this study using the precise grading plans and actual building design specifications, and may include additional abatement, if necessary, to meet the County of Riverside 45 dBA CNEL interior noise level standard. (Urban Crossroads, 2014a, p. 47).

Implementation of the required mitigation would ensure that potential impacts to future residents associated with exterior and interior noise levels would be reduced to a less than significant level.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Off-Site Project-Related Traffic Noise Impacts

Traffic generated by the proposed Project would influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise level increases on the surrounding off-site areas, the changes in traffic noise levels on 21 roadway segments surrounding the Project site were estimated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the Lake Ranch (Tract No. 36730) Traffic Impact Analysis (IS/MND Appendix K). To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Year 2016, and Year 2035 traffic conditions. 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 the following traffic scenarios:

- Existing Without / With Project: This scenario refers to the existing present-day noise conditions, without the Project and with the construction of the proposed Project.
- Year 2016 Without / With Project: This scenario refers to the background noise conditions at future Year 2016 with and without the proposed Project. This scenario corresponds to 2016 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis.
- Year 2035 Without / With Project: This scenario refers to the background noise conditions at future Year 2035 with and without the proposed Project. This scenario corresponds to 2035 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis prepared for the proposed Project (Urban Crossroads, 2014a, p. 33).

The noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. Tables 6-1 through 6-6 of the Noise Impact Analysis (IS/MND Appendix J) present a summary of the uncontrolled exterior traffic noise levels for the 21 study area roadway segments analyzed from the "without Project" and "with Project" conditions in each of the three timeframes: Existing, Year 2016, and Year 2035 conditions. Appendix 6.1 to the Noise Impact Analysis (IS/MND Appendix J) includes a summary of the traffic noise level contours for each of the six traffic scenarios.

A significant off-site traffic noise level impact would occur if the without Project noise levels at nearby noise-sensitive receivers:

- Are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater noise level increase, or;
- Range from 60 to 65 dBA CNEL and the project creates a barely perceptible 3 dBA CNEL or greater project noise level increase; or
- Already exceed 65 dBA CNEL, and the project creates a community noise level impact of greater than 1.5 dBA CNEL (Urban Crossroads, 2014a, p. 33)

As shown on Table EA-27, *Existing Off-Site Project-Related Traffic Noise Impacts*, for existing conditions, the Project would increase the off-site traffic noise levels between 0.0 to 3.3 dBA CNEL on the off-site roadway segments. All noise increases attributable to the Project would be less than 1.5 dBA CNEL, except for the roadway segment of McAllister Street north of El Sobrante Road, where the Project would contribute an increase of 3.3 dBA. As shown in Table EA-27, this segment of McAllister Street has noise levels less than 60 dBA CNEL under existing conditions; therefore, the Project's

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-27 Existing Off-Site Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA)			Potential Significant Impact? ²
				Without Project	With Project	Project Addition	
1	La Sierra Av.	n/o SR-91 WB Ramps	Residential	79.7	79.7	0.0	No
2	La Sierra Av.	s/o SR-91 WB Ramps	Commercial	79.9	79.9	0.0	No
3	La Sierra Av.	s/o SR-91 EB Ramps	Commercial	80.6	80.7	0.1	No
4	La Sierra Av.	s/o Indiana Av.	Residential	79.3	79.4	0.1	No
5	La Sierra Av.	n/o Arizona Av.	Residential	78.1	78.3	0.2	No
6	La Sierra Av.	s/o Arizona Av.	Residential	78.3	78.5	0.2	No
7	La Sierra Av.	s/o Victoria Av.	Residential	78.6	78.9	0.3	No
8	La Sierra Av.	n/o McAllister Pkwy.	Residential	78.6	78.8	0.2	No
9	La Sierra Av.	s/o McAllister Pkwy.	Residential	78.0	78.2	0.2	No
10	La Sierra Av.	n/o El Sobrante Rd.	Residential	75.9	76.2	0.3	No
11	La Sierra Av.	s/o El Sobrante Rd.	Residential	71.3	71.5	0.2	No
12	A St.	n/o McAllister Pkwy.	Residential	n/a	n/a	n/a	n/a
13	McAllister Pkwy.	s/o A St.	Residential	n/a	n/a	n/a	n/a
14	McAllister Pkwy.	n/o El Sobrante Rd.	Residential	57.5	60.8	3.3	No
15	Indiana Av.	w/o La Sierra Av.	Commercial	76.9	77.0	0.1	No
16	Indiana Av.	e/o La Sierra Av.	Residential	75.5	75.6	0.1	No
17	McAllister Pkwy.	e/o La Sierra Av.	Residential	64.8	65.2	0.4	No
18	McAllister Pkwy.	w/o A St.	Residential	n/a	n/a	n/a	n/a
19	El Sobrante Rd.	e/o La Sierra Av.	Residential	73.6	74.2	0.6	No
20	El Sobrante Rd.	w/o McAllister Pkwy.	Residential	73.0	73.7	0.7	No
21	El Sobrante Rd.	e/o McAllister Pkwy.	Residential	73.2	73.6	0.4	No

¹ Sources: City of Riverside General Plan Land Use Policy Map, November 2007, and the County of Riverside General Plan, Lake Mathews Area Land Use Plan, October 2003.

² Significance Criteria (Section 4, Table 4-1, of the Noise Impact Analysis, IS/MND Appendix J).

"n/a" = Roadway segment does not exist.

(Urban Crossroads, 2014a, Table 6-7)

contribution to noise levels along this roadway segment would be less than significant based on the above-described significance criteria. (Urban Crossroads, 2014a, p. 40)

Table EA-28, *Year 2016 Off-Site Project-Related Traffic Noise Impacts*, indicates that for Year 2016 conditions, the Project would increase the off-site traffic noise levels between 0.0 to 1.6 dBA CNEL. All Project-related noise increases would be less than 1.5 dBA CNEL, except for the segment of McAllister Street north of Street A, where the Project-related noise increase would be 1.6 dBA CNEL. As shown in Table EA-28, this segment is projected to have a noise level of 61.0 dBA CNEL without the addition of Project traffic; therefore, impacts along this segment would be less than significant based on the above-described significance criteria. (Urban Crossroads, 2014a, p. 40)

Table EA-29, *Year 2035 Off-Site Project-Related Traffic Noise Impacts*, indicates that for Year 2035 conditions, the Project would increase the off-site traffic noise levels between 0.0 to 0.8 dBA CNEL. Because the Project would not result in an off-site noise increase of 1.5 dBA CNEL on any study area road segment, impacts would be less than significant based on the above-described significance criteria. (Urban Crossroads, 2014a, p. 40)

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-28 Year 2016 Off-Site Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA)			Potential Significant Impact? ²
				Without Project	With Project	Project Addition	
1	La Sierra Av.	n/o SR-91 WB Ramps	Residential	80.3	80.3	0.0	No
2	La Sierra Av.	s/o SR-91 WB Ramps	Commercial	80.7	80.7	0.0	No
3	La Sierra Av.	s/o SR-91 EB Ramps	Commercial	81.5	81.5	0.0	No
4	La Sierra Av.	s/o Indiana Av.	Residential	80.2	80.3	0.1	No
5	La Sierra Av.	n/o Arizona Av.	Residential	79.2	79.3	0.1	No
6	La Sierra Av.	s/o Arizona Av.	Residential	78.9	79.0	0.1	No
7	La Sierra Av.	s/o Victoria Av.	Residential	79.3	79.4	0.1	No
8	La Sierra Av.	n/o McAllister Pkwy.	Residential	79.3	79.4	0.1	No
9	La Sierra Av.	s/o McAllister Pkwy.	Residential	78.4	78.5	0.1	No
10	La Sierra Av.	n/o El Sobrante Rd.	Residential	76.4	76.6	0.2	No
11	La Sierra Av.	s/o El Sobrante Rd.	Residential	72.3	72.5	0.2	No
12	A St.	n/o McAllister Pkwy.	Residential	62.3	62.9	0.6	No
13	McAllister Pkwy.	s/o A St.	Residential	61.0	62.6	1.6	No
14	McAllister Pkwy.	n/o El Sobrante Rd.	Residential	62.3	63.1	0.8	No
15	Indiana Av.	w/o La Sierra Av.	Commercial	77.3	77.4	0.1	No
16	Indiana Av.	e/o La Sierra Av.	Residential	77.4	77.5	0.1	No
17	McAllister Pkwy.	e/o La Sierra Av.	Residential	66.9	67.1	0.2	No
18	McAllister Pkwy.	w/o A St.	Residential	62.6	63.2	0.6	No
19	El Sobrante Rd.	e/o La Sierra Av.	Residential	74.2	74.6	0.4	No
20	El Sobrante Rd.	w/o McAllister Pkwy.	Residential	73.7	74.2	0.5	No
21	El Sobrante Rd.	e/o McAllister Pkwy.	Residential	73.6	73.9	0.3	No

¹ Sources: City of Riverside General Plan Land Use Policy Map, November 2007, and the County of Riverside General Plan, Lake Mathews Area Land Use Plan, October 2003.

² Significance Criteria (Section 4, Table 4-1, of the Noise Impact Analysis, IS/MND Appendix J). (Urban Crossroads, 2014a, Table 6-8)

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-29 Year 2035 Off-Site Project-Related Traffic Noise Impacts

ID	Road	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA)			Potential Significant Impact? ²
				Without Project	With Project	Project Addition	
1	La Sierra Av.	n/o SR-91 WB Ramps	Residential	80.6	80.6	0.0	No
2	La Sierra Av.	s/o SR-91 WB Ramps	Commercial	81.1	81.2	0.1	No
3	La Sierra Av.	s/o SR-91 EB Ramps	Commercial	81.8	81.8	0.0	No
4	La Sierra Av.	s/o Indiana Av.	Residential	80.5	80.6	0.1	No
5	La Sierra Av.	n/o Arizona Av.	Residential	79.7	79.8	0.1	No
6	La Sierra Av.	s/o Arizona Av.	Residential	79.3	79.5	0.2	No
7	La Sierra Av.	s/o Victoria Av.	Residential	80.0	80.1	0.1	No
8	La Sierra Av.	n/o McAllister Pkwy.	Residential	80.0	80.1	0.1	No
9	La Sierra Av.	s/o McAllister Pkwy.	Residential	79.7	79.8	0.1	No
10	La Sierra Av.	n/o El Sobrante Rd.	Residential	79.1	79.2	0.1	No
11	La Sierra Av.	s/o El Sobrante Rd.	Residential	76.2	76.3	0.1	No
12	A St.	n/o McAllister Pkwy.	Residential	67.9	68.1	0.2	No
13	McAllister Pkwy.	s/o A St.	Residential	64.3	65.1	0.8	No
14	McAllister Pkwy.	n/o El Sobrante Rd.	Residential	63.2	63.9	0.7	No
15	Indiana Av.	w/o La Sierra Av.	Commercial	78.4	78.4	0.0	No
16	Indiana Av.	e/o La Sierra Av.	Residential	78.0	78.1	0.1	No
17	McAllister Pkwy.	e/o La Sierra Av.	Residential	67.5	67.7	0.2	No
18	McAllister Pkwy.	w/o A St.	Residential	65.5	65.8	0.3	No
19	El Sobrante Rd.	e/o La Sierra Av.	Residential	77.0	77.2	0.2	No
20	El Sobrante Rd.	w/o McAllister Pkwy.	Residential	77.0	77.2	0.2	No
21	El Sobrante Rd.	e/o McAllister Pkwy.	Residential	76.8	77.0	0.2	No

¹ Sources: City of Riverside General Plan Land Use Policy Map, November 2007, and the County of Riverside General Plan, Lake Mathews Area Land Use Plan, October 2003.

² Significance Criteria (Section 4, Table 4-1, of the Noise Impact Analysis, IS/MND Appendix J). (Urban Crossroads, 2014a, Table 6-9)

The above analysis demonstrates that the Project's contributions to roadway noise levels would be less than significant for Existing, Year 2016, and Year 2035 conditions. Therefore, the proposed Project would not create a substantial permanent increase in traffic-related noise levels or expose persons to noise levels in excess of the exterior noise level standards established by the County of Riverside, and the Project's traffic-related noise effects to sensitive receptors located off-site would be less than significant.

d) As detailed in the Noise Impact Analysis prepared for the proposed project (IS/MND Appendix J), potential groundborne vibration/noise impacts could occur in association 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, 2014a, p. 31)

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table EA-30, *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 Federal Transportation Administration (FTA). To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $LVdB(D) = LVdB(25\text{ ft}) - 30\log(D/25)$. (Urban Crossroads, 2014a, p. 31)

Table EA-30 Vibration Source Levels for Construction Equipment

Equipment	Vibration Declbels (VdB) at 25 feet
Small bulldozer	58
Jackhammer	79
Loaded Trucks	86
Large bulldozer	87

(Urban Crossroads, 2014a, Table 5-7)

The blasting of hard rock areas is a major source of potential vibration impacts to nearby residential receivers when conducted during construction activities. The intensity of the vibration impacts associated with rock blasting depends on location, size, material, shape of the rock, and the methods used to crack it. While a blasting contractor can design the blasts to stay below a given vibration level that could cause damage to nearby sensitive structures, it is difficult to design blasts that are not perceptible to receivers in the vicinity of the blast site. (Urban Crossroads, 2014a, p. 32)

Construction Vibration Impacts

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 include but are not limited to the following (Urban Crossroads, 2014a, p. 67):

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to building, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.
- Blasting: The intensity of the vibration impacts associated with rock blasting depends on location, size, material, shape of the rock, and the methods used to crack it.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would occur within the Project site are expected to include grading and blasting, which would have the

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

potential to generate low levels of ground-borne vibration. Using the vibration source level of construction equipment provided on Table EA-30 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table EA-31, *Construction Equipment Noise Levels*, presents the expected Project related vibration levels at each of the ten sensitive receiver locations.

Table EA-31 Construction Equipment Noise Levels

Noise Receiver ¹	Distance To Property Line (In Feet)	Receiver Vibration Levels (VdB) ²					Potential Significant Impact? ³
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Peak Vibration	
R1	471'	19.7	40.7	47.7	48.7	48.7	No
R2	1,178'	7.8	28.8	35.8	36.8	36.8	No
R3	629'	16.0	37.0	44.0	45.0	45.0	No
R4	481'	19.5	40.5	47.5	48.5	48.5	No
R5	292'	26.0	47.0	54.0	55.0	55.0	No
R6	173'	32.8	53.8	60.8	61.8	61.8	No
R7	101'	39.8	60.8	67.8	68.8	68.8	No
R8	94'	40.7	61.7	68.7	69.7	69.7	No
R9	274'	26.8	47.8	54.8	55.8	55.8	No
R10	934'	10.8	31.8	38.8	39.8	39.8	No

1 Noise receiver locations are shown on Exhibit 8-A of the Noise Impact Analysis (IS/MND Appendix J).

2 Based on the Vibration Source Levels of Construction Equipment included on Table EA-30.

3 Does the Peak Vibration exceed the FTA maximum acceptable vibration standard of 80 (VdB)? (Urban Crossroads, 2014a, Table 9-10)

Based on the reference vibration levels provided by the FTA, shown on Table EA-30, a large bulldozer represents the peak source of vibration with a reference level of 87 VdB at a distance of 25 feet. At distances ranging from 94 to 1,178 feet from the Project site, construction vibration levels are expected to range from 7.8 to 69.7 VdB. Using the construction vibration assessment methods provided by the FTA, the proposed Project would not include nor require equipment, facilities, or activities that would result in a perceptible human response (annoyance). Accordingly, construction-related vibration impacts would be less than significant. (Urban Crossroads, 2014a, p. 68)

Hard Rock Blasting Ground-Borne Vibration

The construction of the proposed Project would include blasting of hard rock areas, which is a major source of potential vibration impacts to nearby residential receivers. The intensity of the vibration impacts associated with rock blasting depends on location, size, material, shape of the rock, and the methods used to crack it. While a blasting contractor can design the blasts to stay below a given vibration level that could cause damage to nearby sensitive structures, it is difficult to design blasts that are not perceptible to receivers in the vicinity of the blast site. (Urban Crossroads, 2014a, p. 68)

To reduce the risk of damage to the adjacent homes, traditional blasting methods utilizing explosives should not occur within 200 feet from any existing home. The use of alternate rock breaking methods must be used within 200 feet from any existing noise-sensitive homes. The *Transportation and Construction Vibration Guidance Manual* provides the human perception thresholds for vibration due to blasting at a peak particle velocity (PPV) level of 0.02 in/sec, and provides vibration velocity levels

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

for various building materials susceptible to damage. For residential structures, the threshold of damage for vibration is approximately 3.0 in/sec (PPV) for cosmetic cracking and damage. (Urban Crossroads, 2014a, pp. 68-69)

It is anticipated that blasting-related impacts would represent a significant impact for which mitigation would be required. To reduce blasting-related impacts to a level below significance, Mitigation Measure M-N-1 has been imposed on the Project, requiring the preparation and implementation of a Blasting Noise and Vibration Monitoring And Abatement Plan during construction activities. A pre- and post-blast survey radius of approximately 200 feet is required to assess the potential vibration level radius due to blasting activities and shall include the inspection of the closest residential structures. Existing defects or damage must be noted and documented to determine the conditions of the closest residential homes, and surveys shall be offered to homeowners to assess such damage. Neighborhood meetings, notifications, or posting of signs are all required as part of the Blasting Noise And Vibration Monitoring and Abatement Plan to notify nearby homeowners of the blasting activities. To reduce adverse effects, Mitigation Measure M-N-1 also requires that rock blasting activities be limited during the permitted hours for construction activity between 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May, as required by the County of Riverside Code of Ordinances. Further, the identified mitigation requires the blasting contractor to design the blasts using alternative methods when located within 200 feet of existing residential structures, and when necessary, reduce vibration velocity levels from each blast below the damage threshold of 3.0 in/sec. A blast signal shall be used to notify nearby residents that blasting is about to occur. Lastly, all complaints must be responded to and investigated as they occur. (Urban Crossroads, 2014a, p. 69)

With implementation of the required mitigation, the vibration levels at nearby residential receivers would be reduced. Because Mitigation Measure M-N-1 includes measures identified by the California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, the vibration velocity levels due to blasting activities are expected to be reduced to less-than-significant levels. (Urban Crossroads, 2014a, pp. 69-70)

Soil Import Truck Haul Trips

The Project site will require 102,877 cubic yards (c.y.) of import material in order to balance². Soil import would take place for approximately eight months concurrent with grading activities during Project construction. To assess the potential vibration impacts from truck haul trips associated with soil import activities, the human threshold of perception for vibration of 0.02 in/sec (PPV) is used. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement condition. Typical vibration levels for the proposed Project's heavy truck activity at normal traffic speeds would not exceed 0.02 in/sec. Truck deliveries transiting on-site would be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes would not exceed the vibration threshold for human perception identified by the California Department of Transportation of 0.02 in/sec (PPV), and therefore, would be less than significant. (Urban Crossroads, 2014a, p. 70)

Conclusion

As indicated in the preceding analysis, the Project construction vibration levels ranging from 7.8 to

² It should be noted that the Project's Noise Impact Analysis (IS/MND Appendix J) assumes the Project would require up to 223,000 c.y. of soil import; thus, the Noise Impact Analysis presents a "worst-case" analysis of potential impacts associated with haul truck trips.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

69.7 VdB are not expected to exceed the Federal Transportation Administration (FTA) maximum acceptable vibration standard of 80 VdB. Based on the California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, and with the incorporation of Mitigation Measure M-N-1, the vibration levels from blasting activities and soil import truck haul trips would not exceed the human perception threshold of 0.02 in/sec or the residential structure damage threshold of 3.0 in/sec. (Urban Crossroads, 2014a, p. 70)

Further, impacts at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but would occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. Moreover, construction at the Project site would be restricted to the daytime hours consistent with County requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours. On this basis the potential for the Project to result in exposure of persons to, or generation of, excessive ground-borne vibration is determined to be less than significant. (Urban Crossroads, 2014a, p. 70)

Mitigation:

M-N-1 (Condition of Approval 10.HEALTH.002) In order to reduce construction-related noise affecting nearby noise sensitive residential land uses to the maximum feasible extent, the following requirements shall apply:

- ~~Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that w~~Whenever a construction site is located within one-quarter (1/4) mile of an occupied residence or residences construction activities shall be limited between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. Exceptions to these standards shall be allowed only with the written consent of the building official.
- ~~A Noise Abatement Plan shall be prepared and submitted to the County for review and approval prior to issuance of grading permits. The plan shall depict t~~The location of construction equipment and ~~how the~~ noise from this equipment shall be reduced during construction of the Project through the use of such methods as:
 - 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 east) during all Project construction.
 - In order to reduce nighttime noise level contributions, it is recommended that outgoing flatbed trailer loading occur during the daytime or evening hours before Project site delivery, and that the loaded trailer be parked near the driveway to the site. This will reduce the duration of equipment

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

pick-up activity noise and increase the distance between the nearest noise receivers.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May).
- No music or electronically reinforced speech from construction workers shall be audible at noise-sensitive properties.
- ~~Prior to issuance of grading permits that include~~ During grading/blasting activities within hard rock areas, a Blasting Noise and Vibration Monitoring and Abatement Plan shall be prepared and submitted to the County. The Blasting Noise and Vibration Monitoring and Abatement Plan the Project shall adhere to the shall include the following requirements:
 - Pre-blasting inspections shall be offered to homes within 200 feet of the hard rock areas.
 - Existing damage of each structure shall be documented.
 - Post-blasting inspections shall be offered to assess new or additional damage to each residential structure once blasting activities have ceased.
 - Traditional rock blasting methods shall not occur within 200 feet from any residential home. In these areas rock breaking must be performed with nonexplosive methods.
 - Blasting mats shall be used whenever feasible to further reduce the noise from blasting activities.
 - Nearby residential homes shall be notified via postings on the construction site 24 hours before the occurrence of major construction related noise and vibration impacts (such as grading and rock blasting) which may affect them.
 - The County may impose conditions and procedures on the blasting operations as necessary. The construction contractor shall comply with these measures for the duration of the blasting permit. The County may inspect the blast site and materials at any reasonable time (pursuant to County of Riverside Ordinance No. 787).

M-N-2

(Condition of Approval 10.HEALTH.002) To satisfy the County of Riverside 65 dBA CNEL exterior noise level standards for single-family residential development, 6-foot high noise barriers for lots adjacent to McAllister Street and El Sobrante Road are required as depicted on Exhibits ES-A and ES-B of the Project's Noise Impact Analysis, prepared by Urban Crossroads and dated December 11, 2014. Construction of the required barriers would reduce the future exterior noise levels to between 52.9 and 64.4 dBA CNEL. The recommended noise control barriers shall be constructed so that the top of each wall extends to the recommended height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the recommended height above the highest point between the residential home and the road. The barriers shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The noise barrier may be constructed using one of the following materials:

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

- 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
- Earthen berm
- Any combination of these construction materials

The barrier must present a solid face from top to bottom. Unnecessary openings or decorative cutouts should not be made. All gaps (except for weep holes) should be filled with grout or caulking.

M-N-3

(Condition of Approval 10.HEALTH.002) To satisfy the County of Riverside 45 dBA CNEL interior noise level criteria, lots facing El Sobrante Road and McAllister Street will require a Noise Level Reduction (NLR) of up to 27.1 dBA and a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning). In order to meet the County of Riverside 45 dBA CNEL interior noise standards the Project shall provide the following or equivalent Project Design Features:

- Windows:
 - All windows and sliding glass doors shall be well fitted, well weather-stripped assemblies and shall have a minimum sound transmission class (STC) rating of 27.
 - Lots 84 to 93 adjacent to El Sobrante Road will require upgraded second floor windows with a minimum STC rating of 31.
- Doors: All exterior doors shall be well weather-stripped solid core assemblies at least one and three-fourths-inch thick.
- Roof: Roof sheathing of wood construction shall be well fitted or caulked plywood of at least one-half inch thick. Ceilings shall be well fitted, 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.
- Attic: Attic vents should be oriented away from El Sobrante Road and McAllister Street. If such an orientation cannot be avoided, then an acoustical baffle shall be placed in the attic space behind the vents.
- 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. A forced air circulation system (e.g. air conditioning) shall be provided which satisfies the requirements of the Uniform Mechanical Code. Wall mounted air conditioners shall not be used.
- Furnishings: All bedrooms, when in use, are expected to contain furniture or other materials that absorb sound equivalent to the absorption provided by wall-to-wall carpeting over a conventional pad.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

With the interior Project Design Features provided in this study, the proposed Lake Ranch (Tract No. 36730) is expected to meet the County of Riverside 45 dBA CNEL interior noise level standards for residential development. A final noise study shall be prepared prior to obtaining building permits for the Project. This report would finalize the Project Design Features proposed in this study using the precise grading plans and actual building design specifications, and may include additional abatement, if necessary, to meet the County of Riverside 45 dBA CNEL interior noise level standard.

Monitoring:

- M-N-1 Prior to approval of grading plans and/or issuance of building permits, the Riverside County Building and Safety Department shall ensure the Project's plans include the required notes. Prior to issuance of grading permits, the County shall review and approve a Noise Abatement Plan, which shall be adhered to by construction contractors during all construction activities on-site. Prior to issuance of grading permits that include hard rock areas, a Blasting Noise and Vibration Monitoring and Abatement Plan shall be approved by Riverside County, and construction contractors shall be required to adhere to the requirements specified therein during all grading activities involving hard rock blasting.
- M-N-2 Prior to building permit final inspection, the Riverside County Building and Safety Department shall ensure that the required noise barriers have been constructed.
- M-N-3 Prior to issuance of building permits, the Riverside County Building and Safety Department shall ensure that the building plans include the required noise attenuation measures, and shall verify the required features have been constructed prior to building permit final inspection.

POPULATION AND HOUSING Would the project

35. Housing

a) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
d) Affect a County Redevelopment Project Area?	☐	☐	☐	☒
e) Cumulatively exceed official regional or local population projections?	☐	☐	☐	☒
f) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Source: Project Application Materials, Riverside County GIS (Riverside County, 2013), General Plan, General Plan Housing Element

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Findings of Fact:

a & c) Under existing conditions, the Project site contains two existing single family homes, only one of which is occupied (Environ, 2013, p. 8; Google Earth, 2015). The Project proposes to develop the site with up to 272 residential homes, which would provide new opportunities for housing in the County. The elimination of the two existing homes on-site would not displace substantial numbers of existing housing or people requiring the construction of replacement housing elsewhere. Accordingly, no impact would occur.

b) The Project is a proposed residential community and would provide for 272 new homes providing housing for approximately 909 residents (Riverside County, 2013, Appendix E-1, Table E-2). The Project would provide for new housing opportunities on the site, which would help meet the current population growth trends in western Riverside County. The residential dwelling units proposed as part of the Project would not result in an increased demand for affordable housing. Therefore, the proposed Project would not create a demand for additional housing, including housing affordable to households earning 80% or less of the County's median income, and no impact would occur.

d) According to Riverside County GIS, the proposed Project site and off-site impact areas are not located within or adjacent to any County Redevelopment Project Areas (Riverside County, 2015). Accordingly, the Project has no potential to affect a County Redevelopment Project Area, and no impact would occur.

e) The General Plan assigns the following land use designations to the Project site: RC-EDR (2.3 acres), Rural Community-Low Density Residential (22.5 acres), Community Development-Medium Density (62.6 acres), and Community Development-Commercial Retail (11.6 acres) land uses. Therefore, and based on the residential density restrictions specified by Policy LMWAP 1.2, the General Plan assumes that the Lake Ranch property would be developed with up to 233 dwelling units and approximately 177,000 square feet of commercial retail uses. The 233 dwelling units would yield a future population of 778 residents (Riverside County, 2013, Table E-2). The 177,000 s.f. of commercial retail uses would generate approximately 354 jobs. According to Appendix E to the 2003 General Plan, the participation rate in Riverside County, which is the percent of the total population that is either employed or not employed but actively seeking employment, is 44.86% (Riverside County, 2003a). Thus, the 354 new jobs that would be expected within the on-site CR land use designation would result in a total population increase in the County by 606 residents. Accordingly, based on the existing General Plan land use designations applied to the Project site, buildout in accordance with the site's existing designations would result in a future population increase of approximately 1,384 people.

The Lake Ranch project proposes the development of 272 dwelling units and no commercial retail uses. These 272 dwelling units would result in a future population of 909 people (Riverside County, 2013, Appendix E-1, Table E-2). Thus, future population associated with the proposed Project would be less than what would be reasonably expected based on the site's existing General Plan land use designations. Accordingly, the proposed Project would not cumulatively exceed official regional or local population projections, and no impact would occur.

f) The proposed Project would develop the subject property with 272 residential homes. At full build-out, the Project is estimated to provide housing for 909 people (Riverside County, 2013, Table E-2).

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

It is unlikely that the Project could induce off-site population growth because the Project site abuts existing medium density residential development to the west. Additionally, none of the improvements planned as part of the Project (e.g., proposed water and sewer lines) would remove impediments to growth such that the adjacent, largely undeveloped properties to the north and east would be induced to convert to urban uses. Furthermore, all lands surrounding the Project site are planned by the Riverside County General Plan for development with residential uses at various densities, and it is unlikely that development of the Project site with residential uses would induce these nearby properties to be developed in accordance with their existing General Plan land use designations because there are no regional improvements proposed by the Project that would remove obstacles to development, such as the construction of a regional sewer line.

Under CEQA, direct population growth by a project is not considered necessarily detrimental, beneficial, or of little significance to the environment. Typically, population growth would be considered a significant impact pursuant to CEQA if it directly or indirectly affects the ability of agencies to provide needed public services and requires the expansion or new construction of public facilities and utilities, or if it can be demonstrated that the potential growth results in a physical adverse environmental effect. As documented in this IS/MND, activities of the proposed Project's population would result in impacts associated with transportation/traffic while all other population-based impacts would be less than significant. Mitigation measures are provided in this IS/MND to reduce the Project's transportation/traffic impacts to less-than-significant levels. Accordingly, the Project's impacts associated with population inducement would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

36. Fire Services

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

Source: Riverside County, 2003a, Safety Element; County of Riverside, 1986; Ordinance No. 659; Google Earth, 2014.

Findings of Fact:

The Riverside County Fire Department provides fire protection services to the Project area. Pursuant to the Riverside County Fire Department's *Fire Protection and Emergency Medical Master Plan*, the Project would be classified as "Category II – Urban," which requires a fire station to be within three (3) roadway miles of the Project and a full first alarm assignment team operating on the scene within 15 minutes of dispatch. The proposed Project would be primarily served by the Lake Hills Fire Station (Station No. 82), located at 17452 Lakepointe Drive, Riverside, CA 92503, or approximately two (2) roadway miles from the site, which would meet the Category II – Urban level of service criteria established by the Riverside County Fire Department (Google Maps, 2015).

Development of the proposed Project would impact fire protection services by placing an additional demand on existing Riverside County Fire Department resources should its resources not be

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

augmented. To offset the increased demand for fire protection services, the proposed Project would be conditioned by the County to provide a minimum of fire safety and support fire suppression activities, including compliance with State and local fire codes, fire sprinklers, a fire hydrant system, paved access, and secondary access routes. The Project also shall be conditioned to implement a Fuel Management Plan to minimize the risk of wildland fire hazards (refer to Condition of Approval 60.FIRE.001 and 50.FIRE.005). Furthermore, the Project would be required to comply with the provisions of the County's Development Impact Fee (DIF) Ordinance (Ordinance No. 659), which requires a fee payment to assist the County in providing for public services, including fire protection services. Payment of the DIF fee would ensure that the Project provides fair share funds for the provision of additional public services, including fire protection services, which may be applied to fire facilities and/or equipment, to offset the incremental increase in the demand for fire protection services that would be created by the Project.

Based on the foregoing analysis, implementation of the Project would not result in the need for new or physically altered fire protection facilities, and would not exceed applicable service ratios or response times for fire protections services. Impacts would be less than significant and mitigation is not required.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

37. Sheriff Services

☐
☐
☒
☐

Source: Riverside County, 2003a; Ordinance No. 659; Google Earth, 2014.

Findings of Fact:

The Riverside County Sheriff's Department provides community policing to the Project area via the Perris Sheriff's Station located at 137 N. Perris Boulevard in the City of Perris, or approximately 16.2 roadway miles from the Project site. The Riverside County Sheriff's Department has set a minimum level of service standard of 1.0 deputy per 1,000 people.

At full buildout, the Project would introduce up to 909 new residents on the Project site. There is not a direct correlation between population growth, the number of crimes committed, and the number of Sheriff's Department 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 Riverside Sheriff's Department. To maintain the desirable level of service, buildout of the proposed Project would generate a demand for approximately one (1) deputy. The proposed Project would not, however, result in the need for new or expanded physical sheriff facilities because the addition of one new deputy would not necessitate the construction of new or modified sheriff facilities. The proposed Project's demand on sheriff protection services would not be significant on a direct basis because the Project would not create the need to construct a new Sheriff station or physically alter an existing station.

The Project would be required to comply with the provisions of the County's DIF Ordinance, which requires a fee payment to assist the County in providing for public services, including police protection services. Payment of the DIF fee would ensure that the Project provides fair share funds for the

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

provision of additional police protection services, which may be applied to sheriff facilities and/or equipment, to offset the incremental increase in the demand that would be created by the Project. The Project's incremental demand for sheriff protection services would be less than significant with required payment of DIF fees.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

38. Schools

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

Source: Riverside County, 2003b; State of California, 1998, California Senate Bill 50 (Greene); RUSD, 2014.

Findings of Fact:

The construction of 272 new homes as proposed by the Project would increase the population in the local area and would, consequently, place greater demand on the existing public school system by generating additional students to be served by the Riverside Unified School District (RUSD). Elementary students generated by the Project would attend Lake Mathews Elementary School, located at 12252 Blackburn Road, in the City of Riverside (approximately 1.2 roadway miles west of the Project site). The Project's middle school students would attend Miller Middle School, located at 17925 Krameria Avenue in Riverside (approximately 8.0 roadway miles east of the Project site). The Project's high school students would attend the Arlington High School, located at 2951 Jackson Street in Riverside (approximately 6.3 roadway miles North of the Project site) (RUSD, 2014). Table EA-32, *Project-Related School Services Demand*, provides an estimate of future students that would be generated by the Project, based on the student generation factors provided in the Riverside County General Plan EIR (Riverside County, 2003b, Table 4.15E).

Table EA-32 Project-Related School Services Demand

School Type	Project Units	Student Generation Factor	Total Number of Students
Elementary	272	0.369	101
Middle School	272	0.201	55
High School	272	0.246	70
Total Project-Related Students:			226

Source: (Riverside County, 2003b, Table 4.15E).

Although it is possible that the RUSD may ultimately need to construct new school facilities in the region to serve the growing population within their service boundaries, such facility planning is conducted by RUSD and is not the responsibility of the Project. Furthermore, the proposed Project would be required to contribute fees to the RUSD in accordance with the Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50). Pursuant to Senate Bill 50, payment of school impact fees constitutes complete mitigation for project-related impacts to school services. Therefore, mandatory payment of school impact fees would reduce the Project's impacts to school facilities to a level below significant, and no mitigation would be required.

Mitigation: No mitigation is required.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Monitoring: No monitoring is required.

39. Libraries

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

Source: Riverside County, 2003a; Ordinance No. 659.

Findings of Fact:

Implementation of the Project would result in an increase in the population in the Project area and would increase the demand for library services. The Project would not generate the need for the physical construction of new or expanded public facilities. There are no library facilities or expansion of library facilities proposed as part of the Project.

The Project would be required to comply with the provisions of the County's DIF Ordinance, which requires a fee payment to assist the County in providing public services, including library services. Payment of the DIF fee would ensure that the Project provides fair share funds for the provision of library services, and these funds may be applied to the acquisition and/or construction of public services and/or equipment (including library books). Mandatory payment of DIF fees would ensure that Project-related impacts to public services would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

40. Health Services

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

Source: Riverside County, 2003a; Riverside County, 2003b; Ordinance No. 659.

Findings of Fact:

The proposed Project would increase the regional population and would thereby result in an increased demand for public health services. New development, such as the proposed Project, would not have a significant direct effect on public health services because the increase in the County's tax base would provide additional funding for public health services and facilities. Furthermore, the Project would be required to comply with the provisions of the County's DIF Ordinance, which requires a fee payment to assist the County in providing public services. Payment of the DIF fee would ensure that the Project provides fair share funds for the provision of additional public services, and these funds may be applied to the acquisition and/or construction of public services and/or equipment. Mandatory payment of DIF fees would ensure that Project-related impacts to public services would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

RECREATION

41. Parks and Recreation

a) Would the project include recreational facilities or require the construction or expansion of recreational

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
facilities which might have an adverse physical effect on the environment?				
b) Would the project include the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
c) Is the project located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?	☐	☐	☒	☐

Source: Riverside County, 2013, Appendix E-1; Ordinance No. 460; RCLIS, 2014.

Findings of Fact:

a&b) The Project would develop the subject property with 272 single family homes. Pursuant to the population generation rates contained in the 2013 Draft Riverside County General Plan Update, the Project would accommodate approximately 909 residents (Riverside County, 2013, Appendix E-1, Table E-2). Based on the requirement in Ordinance No. 460 to provide a minimum of five (5) acres of park land for each 1,000 residents, the Project would generate a demand for 5.5 acres of park land.

The Project would construct 2.2 acres of park land and would also construct trails along the site's frontages with McAllister Street and El Sobrante Road. The Project also proposes a regional recreational trail along McAllister and El Sobrante, which is in addition to the 2.18 acre park site. Using the County of Riverside's household density factor of 2.59 persons per household and a local park standard of 3.0 acres per 1,000 persons, the Project would generate a demand for 2.1 acres of park space. Thus, the Project would meet local and Quimby Act requirements of 3.0 acres of parkland per 1,000 persons. Additionally, there are several public parks in the vicinity of the Project site. Refer to Figure 3-8, *Park Locations and Distances*, which shows the nearest public parks and their respective driving distances from the Project site. Development of proposed recreational features within the Project site would have a physical impact on the environment. However, impacts resulting from their construction are described throughout the analysis in this Initial Study. In instances where significant impacts have been identified, mitigation measures are recommended in each applicable subsection of this Initial Study to reduce the impact to less-than-significant levels. Therefore, the construction of recreation facilities on-site would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this Initial Study. Accordingly, additional mitigation measures beyond those identified throughout this Initial Study would not be required.

Based on the foregoing analysis, it is concluded that the proposed Project would result in a less-than-significant impact due to the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

c) The Project site is not located within a County Service area (CSA) or a recreation and park district with a community parks and recreation plan. No impact to the environment would result.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
42. Recreational Trails	☐	☐	☐	☒

Source: LMWAP, Figure 8 (Trails and Bikeway System)

Findings of Fact: According to Figure 8 of the Lake Mathews/Woodcrest Area Plan, a Regional Trail is planned along the Project's frontage with El Sobrante Road, with an additional segment of a Regional Trail planned adjacent to the natural drainage channel that skirts the northeastern corner of the Project site. As shown on IS/MND Figure 3-9, a Regional Trail has been accommodated as part of the proposed improvements to El Sobrante Road, with an additional Regional Trail proposed along the Project's frontage with McAllister Street. Although no trail is planned by the Project adjacent to the drainage due to the limited extent of this drainage on-site and the lack of connections to off-site portions of this trail, the Project would preserve this portion of the Project site as natural open space, thereby allowing for the future construction of a Regional Trail through this area. Impacts associated with the Project's planned improvements have been evaluated throughout this IS/MND, and where significant impacts have been identified, mitigation measures have been imposed on the Project to reduce impacts to below a level of significance. Accordingly, implementation of the proposed Project would not result in environmental impacts associated with the construction of recreational trails, and no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

TRANSPORTATION/TRAFFIC Would the project

43. Circulation	☐	☒	☐	☐
a) Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Alter waterborne, rail or air traffic?	☐	☐	☐	☒
e) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☒	☐
f) Cause an effect upon, or a need for new or altered maintenance of roads?	☐	☐	☒	☐
g) Cause an effect upon circulation during the project's	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
construction?				
h) Result in inadequate emergency access or access to nearby uses?	☐	☐	☐	☒
i) Conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☐	☐	☐	☒

Source: RCIP; Ordinance No. 460; Ordinance No. 461; Urban Crossroads, 2014d; RCTC, 2011; Google Earth, 2014.

Findings of Fact:

a) For purposes of analyzing the Project's potential impacts to traffic, the County of Riverside identified the traffic impact study area in conformance with their Traffic Impact Analysis (TIA) preparation guidelines. Based on these guidelines, the minimum area to be studied includes any intersections to which the Project is anticipated to contribute 50 or more peak-hour trips. With this County of Riverside requirement, and in consultation with the City of Riverside, the traffic study area includes 11 existing and future intersections (Urban Crossroads, 2014b, p. 4). Refer to IS/MND Appendix K for more information about the analysis methodologies employed in the Project-specific TIA prepared by Urban Crossroads.

Thresholds of Significance

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions, which within the Project's study area includes Riverside County, the City of Riverside, and Caltrans facilities. Within the County of Riverside, the acceptable level of service (LOS) is LOS C on all County-maintained roads and conventional State Highways. As an exception, LOS D may be allowed in Community Development areas at intersections of any combination of Secondary Highways, Major Highways, Arterial Highways, Urban Arterial Highways, Expressways or conventional State Highways. LOS E may be allowed in designated Community Centers to the extent that it would support transit-oriented development and pedestrian communities. (Urban Crossroads, 2014b, p. 17) Within the City of Riverside, LOS D is considered an acceptable level of service for intersections of Collector or higher classification (Urban Crossroads, 2014b, p. 18). For Caltrans Facilities, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway System facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. Consistent with the County of Riverside minimum LOS of LOS D, LOS D will be used as the target LOS at arterial-to-freeway ramps. (Urban Crossroads, 2014b, p. 18) Table EA-33, *Summary of LOS Criteria and Thresholds of Significance for Study Area Intersections*, summarizes the applicable level of service (LOS) threshold for each study area intersection.

Existing Conditions

Under existing conditions, the Project site is undeveloped and does not generate traffic. Existing traffic counts in the study area were collected in January, June, and August 2014. Those days were representative of typical weekday peak hour traffic conditions in the study area, as no observations were made in the field by Urban Crossroads that would indicate atypical traffic conditions on this date (Urban Crossroads, 2014b, p. 30). Based on those traffic counts, and as depicted in Table EA-34, *Existing (2014) Conditions Intersection Analysis*, all existing intersections in the study area operate at

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

acceptable LOS, with the exception of the La Sierra Av. / El Sobrante Rd. intersection which operated at a LOS "E" at PM Peak hour conditions. The La Sierra Av. / El Sobrante Rd. intersection warrants a traffic signal under existing conditions to achieve an acceptable LOS (Urban Crossroads, 2014b, p. 30).

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. For Existing traffic conditions, a traffic signal appears to currently be warranted at the following unsignalized study area intersections (see Appendix "3.3" to the Project's Traffic Impact Analysis in IS/MND Appendix K): La Sierra Av. / El Sobrante Rd. (Urban Crossroads, 2014b, p. 34)

A queuing analysis was performed for the westbound and eastbound off-ramps at the SR-91 Freeway at La Sierra Avenue interchange to assess vehicle queues for the off ramps that may potentially impact peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the SR-91 Freeway mainline. Queuing analysis findings are presented in Table EA-35, *Peak Hour Off-Ramp Queuing Analysis for Existing (2014) 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 EA-35, there are no existing queuing issues. Worksheets for Existing conditions off-ramp queuing analysis are provided in Appendix "3.4" of the Project's Traffic Impact Analysis (IS/MND Appendix K).

Project Trip Generation and Distribution

Trip generation represents the amount of traffic that is attracted to and produced by a development project. Determining traffic generation for a specific project is based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses proposed for a given development. The Project is estimated to produce an estimated 2,589 daily vehicle trips, including 204 trips during the AM Peak Hour and 272 trips during the PM Peak Hour, as indicated previously in IS/MND Table 3-5 (Urban Crossroads, 2014b, p. 39). For more information about trip generation, refer to IS/MND Appendix K.

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that would be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the routes where Project traffic would distribute. The trip distribution for the proposed Project was developed based on anticipated passenger car travel patterns to-and-from the Project site. The total volume on each roadway was divided by the Project's total traffic generation to indicate the percentage of Project traffic that would use each component of the regional roadway system in each relevant direction. The Project's trip distribution pattern is graphically depicted on Figure EA-8, *Project Trip Distribution*. (Urban Crossroads, 2014b, p. 40)

The assignment of traffic from the Project area to the adjoining roadway system is based on the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of Project development. Based on the identified Project traffic generation and trip distribution patterns, Project average daily traffic (ADT) volumes for the weekday are shown on Figure EA-9, *Project Average Daily Traffic*. (Urban Crossroads, 2014b, p. 44).

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	--------------

Table EA-33 Summary of LOS Criteria and Thresholds of Significance for Study Area Intersections

#	Intersection	Traffic Control ²	Jurisdiction	LOS Methodology ¹	Acceptable LOS	Deficiency Criteria
1	La Sierra Av. / SR-91 WB Ramps	TS	Caltrans	2010 HCM	D	Addition of project trips causes the peak hour LOS to fall from acceptable LOS to an unacceptable LOS.
2	La Sierra Av. / SR-91 EB Ramps	TS	Caltrans	2010 HCM	D	
3	La Sierra Av. / Indiana Av.	TS	City of Riverside	2010 HCM	D	
4	La Sierra Av. / Arizona Av.	TS	City of Riverside	2010 HCM	D	
5	La Sierra Av. / Victoria Av.	TS	City of Riverside / Riverside County	2010 HCM	D	
6	La Sierra Av. / McAllister Pkwy.	TS	Riverside County	2010 HCM	D	
7	La Sierra Av. / El Sobrante Rd.	AWS	Riverside County	2010 HCM	D	
8	McAllister St. / Driveway 1	CSS	Riverside County	2010 HCM	C	
8A	McAllister St. / Driveway 2	CSS	Riverside County	2010 HCM	C	
9	McAllister St. / El Sobrante Rd.	CSS	Riverside County	2010 HCM	D	
10	Driveway 3/ El Sobrante Rd.	CSS	Riverside County	2010 HCM	D	
11	McAllister St./ "A" St.	CSS	Riverside County	2010 HCM	C	

1 2010 HCM = 2010 Highway Capacity Manual Methodology

2 AWS = All-way Stop; CSS = Cross-street Stop; TS = Traffic Signal (Urban Crossroads, 2014b, Table 2-4)

Potentially
Significant
Impact

Less than
Significant
with
Mitigation
Incorporated

Less Than
Significant
Impact

No
Impact

Table EA-34 Existing (2014) Conditions Intersection Analysis

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		LOS		Acceptable LOS
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	La Sierra Av. / SR-91 WB Ramps	TS	2	3	0	0	3	1	0	0	0	1	1	1	14.4	18.1	B	B	D
2	La Sierra Av. / SR-91 EB Ramps	TS	0	3	1	2	3	0	1	1	1	0	0	0	20.6	20.2	C	C	D
3	La Sierra Av. / Indiana Av.	TS	2	3	1	2	3	1	2	2	1	2	2	d	38.1	36.5	D	D	D
4	La Sierra Av. / Arizona Av.	TS	1	2	d	1	2	1	1	1	0	1	1	1>	41.3	16.6	D	B	D
5	La Sierra Av. / Victoria Av.	TS	1	2	d	1	2	d	2	1	1	1	1	1	19.4	22.6	B	C	D
6	La Sierra Av. / McAllister Pkwy.	TS	0	2	1	1	2	0	0	0	0	1	0	1	11.9	6.9	B	A	D
7	La Sierra Av. / El Sobrante Rd.	AWS	0	2	0	1	1	0	0	1	0	0	1	0	12.8	35.4	B	E	D
8	McAllister St. / Driveway 1	--	Future Intersection												--	--	--	--	C
8A	McAllister St. / Driveway 2	--	Future Intersection												--	--	--	--	C
9	McAllister St. / El Sobrante Rd.	CSS	0	0	0	1	0	d	1	1	0	0	2	0	15.9	18.7	C	C	D
10	Driveway 3 / El Sobrante Rd.	--	Future Intersection												--	--	--	--	D
11	McAllister St. / "A" St.	--	Future Intersection												--	--	--	--	C

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

- 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
- Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
- CSS = Cross-street Stop; AWS = All-Way Stop; TS = Traffic Signal
(Urban Crossroads, 2014b, Table 3-1)

Table EA-35 Peak Hour Off-Ramp Queuing Analysis for Existing (2014) Conditions

Intersection	Movement	Stacking Distance (Feet)	95th Percentile Stacking Distance Required (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM
La Sierra Av. / SR-91 WB Ramps	WBL	585	272	396	Yes	Yes
	WBLTR	1,210	295	384	Yes	Yes
	WBR	520	241	313	Yes	Yes
La Sierra Av. / SR-91 EB Ramps	EBL	1,615	288	321	Yes	Yes
	EBLTR	1,730	303 ²	568 ²	Yes	Yes
	EBR	480	147	523 ^{2,3}	Yes	Yes

- Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.
- 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
- Although the 95th percentile queue length exceeds capacity, the total queue length of the ramp is anticipated to accommodate excess turn pocket queues and is not considered to result in any deficiencies.
(Urban Crossroads, 2014b, Table 3-2)

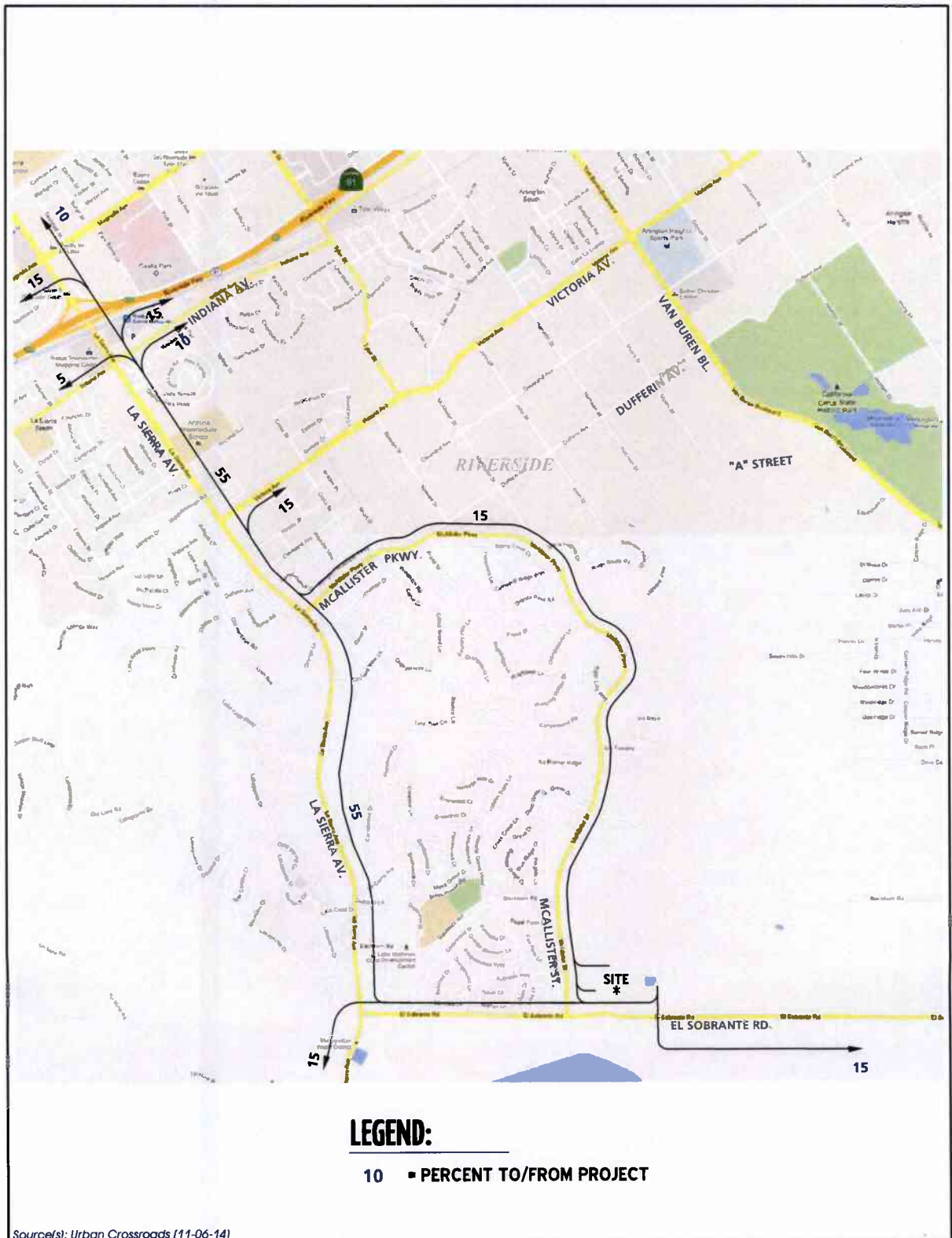


Figure EA-7



PROJECT TRIP DISTRIBUTION

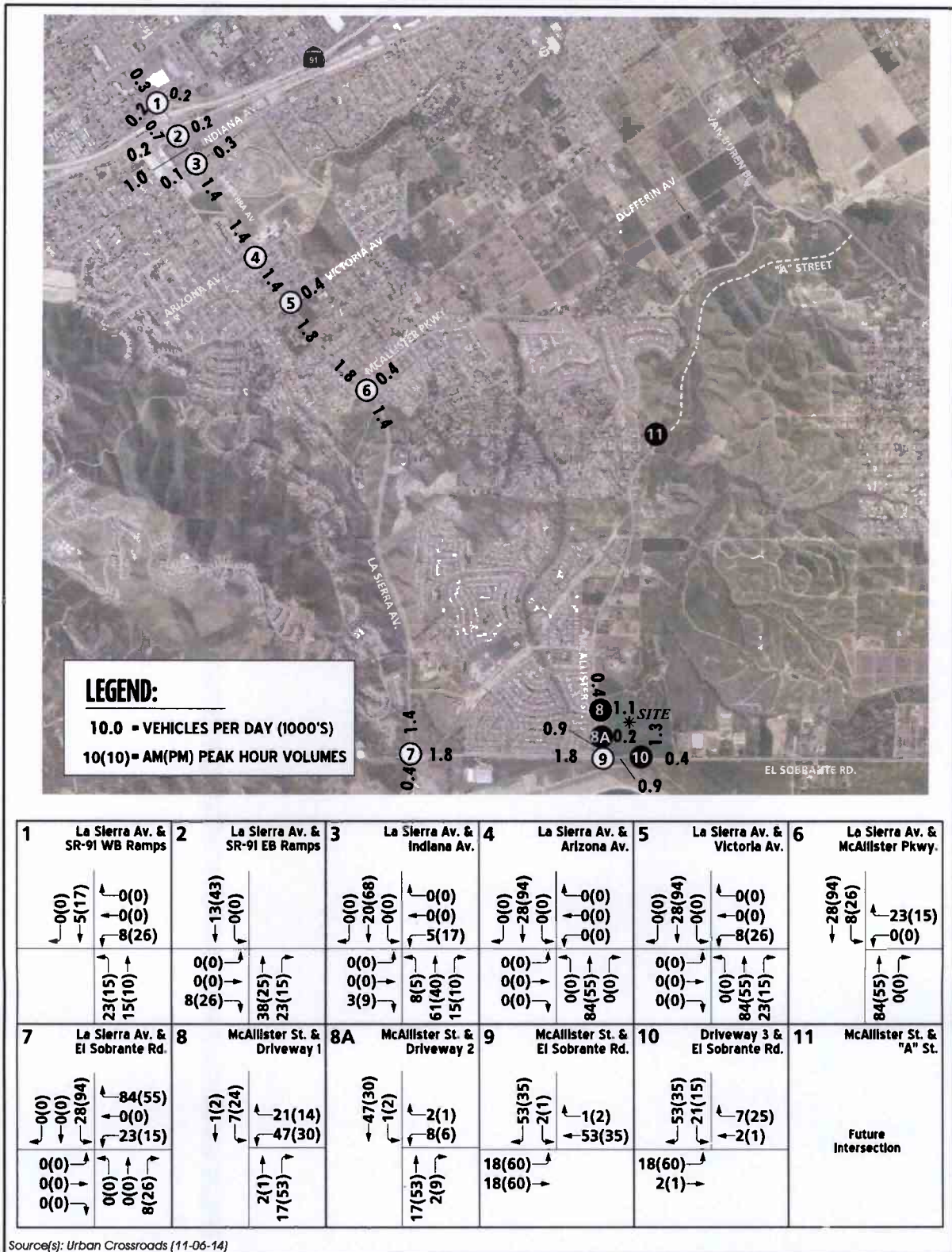


Figure EA-8



PROJECT AVERAGE DAILY TRAFFIC