

Murrieta Hot Springs Road Improvements Project

Draft Initial Study/
Mitigated Negative Declaration

October 2020 | SBO-01

Submitted to:

City of Murrieta
1 Town Square
Murrieta, CA 92562

Prepared for:

SB&O, Inc.
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Temecula, CA 92590

Prepared by:

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ACRONYMS & ABBREVIATIONS

AB	Assembly Bill
Agreement	Cultural Resources Treatment and Monitoring Agreement
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
Btu	British thermal unit
CAL FIRE	California Department of Forestry and Fire Protection
CAP	Climate Action Plan
CARB	California Air Resources Board
CAS	Climate Action Strategies
CASSA	Criteria Area Species Survey Area
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CH ₄	methane
CIP	Capital Improvement Program
City	City of Murrieta
CMP	Congestion Management Plan
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CWA	Clean Water Act
dba	A-weighted decibels
DTSC	Department of Toxic Substances Control
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GWP	global warming potential
HFCs	hydrofluorocarbons
IBC	International Building Code
L _{EQ}	one-hour equivalent
LOS	level of service
LRA	Local Responsibility Area
LST	Localized Significance Threshold

ACRONYMS & ABBREVIATIONS (cont.)

MBTA	Migratory Bird Treaty Act
MBtu	million Btu
MSHCP	Multiple Species Habitat Conservation Plan
MT	metric tons
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NEPSSA	Narrow Endemic Plant Species Survey Area
NO _x	oxides of nitrogen
NSLU	noise-sensitive land use
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PFCs	perfluorocarbons
PM	particulate matter
PPV	peak particle velocity
PRMMP	paleontological resource monitoring and mitigation plan
RCA	Regional Conservation Authority
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF ₆	sulfur hexafluoride
SLF	Sacred Lands File
SO _x	oxides of sulfur
SMAQMD	Sacramento Metropolitan Air Quality Management District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCA	traditionally culturally affiliated
TIA	Traffic Impact Analysis
USACE	U.S. Army Corps of Engineers
VHFHSZ	Very High Fire Hazard Severity Zone
VOCs	volatile organic compounds
WQMP	Water Quality Management Plan

1.0 PROJECT INFORMATION

1.1 INITIAL STUDY INFORMATION SHEET

1. Project title: Murrieta Hot Springs Road Improvements Project
(Capital Improvement Program [CIP] No. 8079)
2. Lead agency name and address: City of Murrieta, 1 Town Square, Murrieta, CA
92562
3. Contact person and phone number: James Ozouf, Associate Civil Engineer
(951) 461-6075
4. Project location: The approximately 15-acre project alignment is
located along Murrieta Hot Springs Road, from the
intersection of Margarita Road to the intersection
of Winchester Road in the City of Murrieta (see
Figure 1, *Regional Location*, and Figure 2, *Project
Alignment*).
5. Project sponsor's name and address: City of Murrieta, 1 Town Square, Murrieta, CA
92562
6. General plan designation: N/A
7. Zoning: N/A

8. Description of project:

The project proposes to implement various improvements to Murrieta Hot Springs Road between Margarita Road and Winchester Road. The roadway would be widened from a 4-lane roadway to a 6-lane roadway between Via Princesa and Winchester Road, and restriped from a 4-lane roadway to a 6-lane roadway between Margarita Road and Via Princesa.

In addition to the roadway widening, additional improvements would occur. Bike lanes would be added in each direction on Murrieta Hot Springs Road. A curbed median would be installed on Murrieta Hot Springs Road between Margarita Road and Winchester Road (except at the intersections). Street lighting would be installed along the alignment. The project would also construct curbs, gutters, catch basins, storm drains, and sidewalks along most of the alignment and both sides of the roadway. Curb access ramps would be improved at project intersections.

Striping would be updated on the roadway to accommodate the new lanes and widened roadway. Additional crosswalks would be painted at the Via Princesa/Murrieta Hot Springs Road and Calle de Lago/Murrieta Hot Springs Road intersections to accommodate the improvements. Street signs would be installed along the route.

Retaining walls would be constructed along the northern edge of Murrieta Hot Springs Road adjacent to the Ridgegate community, and along the southern edge of Murrieta Hot Springs Road adjacent to the residences near Calle de Lago. This would require the removal of ornamental landscaping in the area, as well as the use of drilled, cast-in-place piles to provide adequate slope stability. Retaining wall heights would range from approximately 2 feet to 15 feet; some retaining walls would have a 3-foot step planter installed in front of the retaining wall. In addition, power poles, dry utilities, and fire hydrants would be relocated along the alignment.

Construction is anticipated to begin in Summer 2020 and be completed by Spring 2021. The project would cut 16,630 cubic yards of soil and fill 2,030 cubic yards of soil, for a net export of 14,600 cubic yards. Soil would be disposed of at an approved off-site location. Potential staging areas include: the vacant lot adjacent to the southwest corner of the intersection of Via Princesa and Murrieta Hot Springs Road and the vacant lot adjacent to the southwest corner of the intersection of Margarita Road and Murrieta Hot Springs Road. Construction activities would typically take place between 7 a.m. and 4:30 p.m. on weekdays and Saturdays, in accordance with the City's Municipal Code (City 2018). Incidental night work may occur, but it would be temporary and infrequent. No construction would take place on Sundays or holidays.

Construction Best Management Practices (BMPs) would include maintaining existing slope stabilization measures, stabilizing all slopes greater than three feet in height, and providing inlet protection, gravel bags, and silt fences where applicable. In addition, a Traffic Control Plan would be implemented during construction of the project to maintain traffic flow and safety during project construction activities.

9. Surrounding Land Uses and Setting:

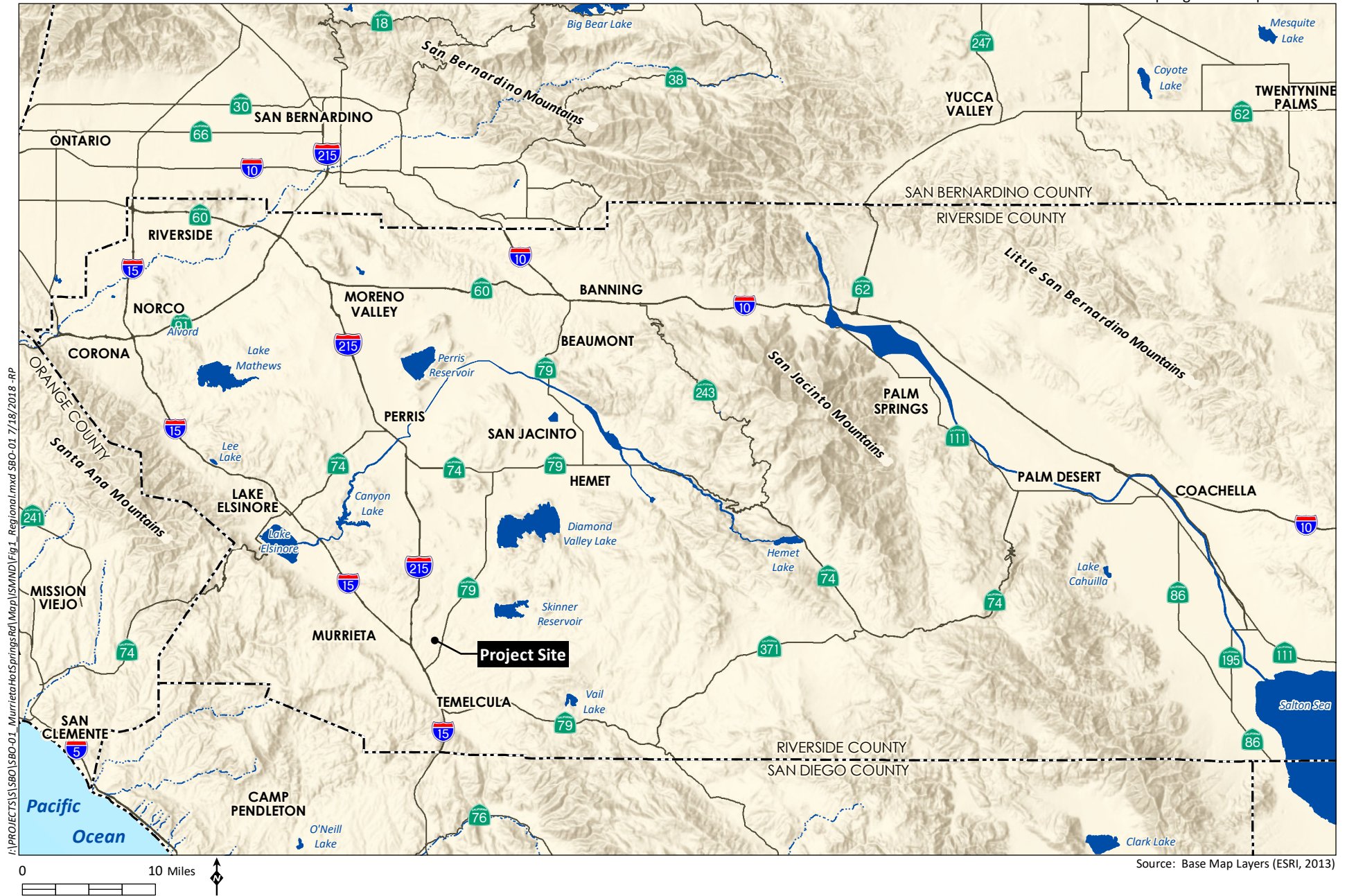
From Margarita Road to Via Princesa, commercial land uses are located to the south and the Calvary Chapel is located to the north. From Via Princesa to Calle Del Lago, land uses include multi-family residences, a golf course, and open space. From Calle Del Lago to Winchester Road, land uses include multi-family residences and large, vacant lots.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

- State Water Resources Control Board (SWRCB): National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit)
- City of Murrieta: Encroachment Permit.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The City of Murrieta mailed letters to five local tribal groups in the project area on June 9, 2020 in order to solicit formal requests for consultation regarding the proposed project pursuant to Assembly Bill (AB) 52. To date, the City has received formal consultation requests from two of the five tribes to which request letters were sent, including the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians. The City has initiated formal consultation with these tribes to gather information regarding





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potential resources, including Tribal Cultural Resources, that may occur in the project area and could be affected by project implementation.

1.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (☒) would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Less than Significant With Mitigation Incorporated” as indicated by the checklist on the following pages.

<input checked="" type="checkbox"/>	Aesthetics		Agricultural and Forestry Resources		Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources		Energy
<input checked="" type="checkbox"/>	Geology/Soils		Greenhouse Gas Emissions		Hazards & Hazardous Materials
	Hydrology/Water Quality	<input checked="" type="checkbox"/>	Land Use/Planning		Mineral Resources
	Noise		Population/Housing		Public Services
	Recreation	<input checked="" type="checkbox"/>	Transportation	<input checked="" type="checkbox"/>	Tribal Cultural Resources
	Utilities/Service Systems		Wildfire	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

1.3 DETERMINATION

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

For

2.0 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Less than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in item 5 below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less than Significant with Mitigation Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significant.

3.0 ENVIRONMENTAL CHECKLIST

I. AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Have a substantial adverse effect on a scenic vista?

Less than Significant Impact. A scenic vista is defined as a viewpoint that provides expansive view of a highly valued landscape for the benefit of the general public. The City General Plan 2035 EIR (2011a) identifies the hillsides to the north, east, and west of the City as scenic views and vistas. Views of the hillsides are available to vehicular passengers and pedestrians traveling along Murrieta Hot Springs Road within the project alignment.

Construction activities would involve the presence of construction equipment, fencing/signage, vehicles, and soil stockpiles; however, because Murrieta Hot Springs Road would remain open to traffic during construction, views to the hillsides would be maintained for vehicular passengers. In addition, the presence of construction equipment would be temporary. Following completion of construction, newly installed lighting poles may be located within the view corridor to the hillsides. Based on the lack of bulk of street lighting poles, however, scenic vistas available from the project alignment would not be substantially affected. Therefore, impacts would be less than significant.

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

No Impact. The project would involve the removal of ornamental landscaping, which may include trees; however, this would not occur within a state scenic highway. Interstate 15, located approximately

1.4 miles southwest of the project alignment, is listed by Caltrans as an Eligible State Scenic Highway, but is not officially designated (Caltrans 2018). Due to topography and distance, the project would likely not be visible from the freeway. Therefore, the project would not damage scenic resources within a state scenic highway, and no impacts would occur.

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

Less than Significant with Mitigation Incorporated. The proposed project is located in a primarily urbanized area. The project would result in a temporary change of appearance along the project alignment during construction. Construction equipment, fencing/signage, vehicles, and soil stockpiles in the construction work and staging areas would be visible predominately to those traveling along Murrieta Hot Springs Road, as well as to residents in the adjacent neighborhoods, users of the golf course, and those traveling on roads that intersect Murrieta Hot Springs Road. These impacts would be temporary. However, as identified in the City General Plan 2035 EIR (City 2011a), aesthetic impacts from construction equipment would be a potentially significant impact in the City. These impacts would be reduced to less than significant through mitigation measures AES-1 through AES-3.

Permanent changes to the existing visual character of the alignment would occur from the project's addition of a wider roadway, a curbed median, lighting poles, sidewalks, and retaining walls that range in height from 2 to 15 feet, as well as the removal of ornamental landscaping. These components may change the area's visual character by adding development to non-developed or landscaped areas. These roadway improvement changes, however, would not drastically alter the use or general character of the existing roadway corridor, which is mostly developed, and would not substantially degrade the existing visual character or quality of the area. Landscaping would also be added through the addition of step planters in front of some of the retaining walls. In addition, the improved roadway would be of similar character to other roadways in the area. Therefore, impacts after construction would be less than significant.

Mitigation Measures

Implementation of mitigation measures AES-1 through AES-3 would reduce potentially significant aesthetic impacts from project construction to less than significant:

- AES-1** Construction documents shall include language that requires the contractor to strictly control the staging of construction equipment and the cleanliness of construction equipment stored or driven beyond the limits of the construction work area. Construction equipment shall be parked and staged within the project site, as distant from the residential use as reasonably possible. Staging areas shall be screened from view from residential properties to the extent feasible.
- AES-2** Construction documents shall include language requiring that construction vehicles be kept clean and free of mud and dust prior to leaving the development site. Streets surrounding the project site shall be swept daily and maintained free of dirt and debris.

AES-3 Construction worker parking shall be located off-site with prior approval by the City. On-street parking of construction worker vehicles on residential streets shall be prohibited.

- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less than Significant Impact. Project construction would primarily occur during daylight hours, during which time no lighting would be required. Construction would typically occur until 4:30 p.m., but incidental night work may be needed on occasion, which would result in the need for nighttime lighting. Lighting that may occur would be directed to the work site to avoid unnecessary spill and would provide a level of lighting that is appropriate for work and safety for workers. Construction lighting would be shielded and/or directed away from adjacent residences to minimize lighting impacts during construction.

The proposed roadway improvements include the addition of lighting poles along Murrieta Hot Springs Road, which could generate additional light and glare in the area. Per Section 16.18.100 of the City Municipal Code (City 2018), exterior lighting shall be (1) architecturally integrated with the character of adjacent structure(s); (2) directed downward and shielded so that glare is confined within the boundaries of the subject parcel; (3) installed so that lights not blink, flash, or be of unusually high intensity or brightness; and (4) appropriate in height, intensity, and scale to the uses they are serving, with outside street lighting requirements addressed through City Standard Drawings. Project design would conform to the City Municipal Code standards. Therefore, impacts from lighting and glare would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526 (g)), or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less than Significant Impact. According to Exhibit 5.11-1 of the City General Plan 2035 EIR (City 2011a), the undeveloped land located along the southern boundary of the project alignment is designated as Farmland of Local Importance; however, the area is not currently used and is not planned for agricultural purposes. In addition, the majority of the project improvements would occur within the existing City right-of-way. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance occurs along the alignment (City 2011a). Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, and impacts would be less than significant.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. According to Exhibit 5.11-1 of the City General Plan 2035 EIR (City 2011a), the undeveloped land located along the southern boundary of the project alignment is designated as Farmland of Local Importance; however, it has a zoning designation of Community Commercial. Exhibit 5.11-2 of the City General Plan 2035 (City 2011b) also does not identify Williamson Act farmland within the project vicinity. In addition, the majority of the project improvements would occur within the existing City right-of-way. Therefore, the project would not conflict with zoning for an agricultural use or a Williamson Act contract, and no impacts would occur.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The project alignment does not contain forest land or timberland and is not zoned for forest land or timberland. No impact would occur.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project alignment does not contain forest land and would not convert forest land to non-forest use. No impact would occur.

- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Less than Significant Impact. See responses II.a-d. Although the project alignment is adjacent to land identified as Farmland of Local Importance on Exhibit 5.11-1 of the City General Plan 2035 EIR (City 2011a), the land is not currently used and is not planned for agricultural purposes. In addition, the majority of the project improvements would occur within the existing City right-of-way. Therefore, the project would not result in the conversion of Farmland or forest land to a non-Farmland or non-forest land use, and impacts would be less than significant

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the Air Quality, Greenhouse Gas Emissions, and Energy Assessment prepared for the proposed project by HELIX Environmental Planning, Inc. (HELIX 2020a; Appendix A).

- a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The project alignment is located within the South Coast Air Basin (SCAB). Air quality in the SCAB is regulated by the South Coast Air Quality Management District (SCAQMD). As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments, as well as cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality

Management Plans (AQMPs). An AQMP establishes a program of rules and regulations directed at attaining the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The regional plan applicable to the proposed project is the SCAQMD's AQMP. The latest AQMP was adopted in March of 2017 (SCAQMD 2017).

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. Regarding air quality planning, SCAG has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that uses growth forecasts to project trends over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with County and City General Plans.

The two principal criteria for conformance to the AQMP are (1) whether a project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards and (2) whether a project would exceed the assumptions in the AQMP (SCAQMD 1993).

With respect to the first criterion, the analyses described under response III.b, below, demonstrate that the project would not generate short-term or long-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

With respect to the second criterion, the proposed project is improving and widening a roadway and would not result in population or employment increases and, therefore, would not exceed the growth projection assumptions in the AQMP. In addition, the proposed project would install bicycle lanes along both sides of Murrieta Hot Springs Road and sidewalks along the majority of the alignment and both sides of the roadway. These improvements support General Plan Climate Action Strategy (CAS) 3, Transportation and Mobility, through the following CAP measures:

- CIR 8 – Development, expansion, and maintenance of a network of bicycle, pedestrian, and multi-use trails that allows residents to travel between parks, schools, neighborhoods, and other major destinations without driving; and
- AQ 5 – Air quality is improved through an efficient circulation system, reduced traffic congestion, and reduced vehicle miles traveled (City 2011a).

Because the project is consistent with the City's General Plan, pursuant to SCAQMD guidelines, the proposed project is considered consistent with the region's AQMP. As such, proposed project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Accordingly, the proposed project would be consistent with the projections in the AQMP, thus resulting in a less than significant impact.

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

Less than Significant Impact. In accordance with CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If a project is not consistent with the AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants, that project can be considered cumulatively considerable. Additionally, if the mass regional emissions calculated for a project exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards, that project can be considered cumulatively considerable. The SCAQMD thresholds of significance for construction and operational air emissions are shown in Table 1, *SCAQMD Criteria Air Pollutant Emissions Thresholds*.

Table 1
SCAQMD CRITERIA AIR POLLUTANT EMISSIONS THRESHOLDS

Criteria Pollutant	Emission Threshold (pounds per day)	
	Construction	Operation
Volatile Organic Compounds (VOC)	75	55
Oxides of Nitrogen (NO _x)	100	55
Carbon Monoxide (CO)	550	550
Particulate Matter (PM ₁₀)	150	150
Particulate Matter (PM _{2.5})	550	55
Oxides of Sulfur (SO _x)	150	150
Lead	3	3

Source: SCAQMD 2019

Construction Impacts

The project's construction emissions were estimated using the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Roadway Construction Emissions Model, version 9.0 (SMAQMD 2018). This model utilizes 2017 EMFAC factors and OFFROAD factors to calculate vehicle exhaust and fugitive dust emissions. Fugitive dust emissions are calculated estimating the maximum area (acres) of land disturbed daily. Roadway widening construction would disturb a total of 4.36 acres over approximately 11 months (242 working days).

Project-specific input was based on general project information, assumptions provided by the project applicant, and default model settings to estimate reasonably conservative conditions. Construction activities include site preparation, demolition of existing roadway, grading, installation of drainage and utilities, retaining walls, and paving. For a conservative analysis, construction of the project is anticipated to commence as early as Spring 2021 and be completed by Winter 2021.

The emissions generated from construction activities would include dust (particulate matter less than 10 microns [PM₁₀] and particulate matter less than 2.5 microns [PM_{2.5}]), primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces, and combustion emissions of air pollutants (reactive organic gas [ROG], nitrogen oxides [NO_x], PM₁₀, PM_{2.5}, carbon monoxide (CO), and sulfur oxides [SO_x]), primarily from operation of heavy-duty off-road equipment. Emission estimates

assume the use of water trucks, yielding a 50 percent control of fugitive dust from watering and associated dust control measures.

The results of the calculations for project construction are shown in Table 2, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds. As shown in the table, construction emissions would not exceed SCAQMD thresholds and impacts would be less than significant.

Table 2
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Phase	Pollutant Emissions (pounds/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation	3	27	25	<0.5	11	3
Grading	6	64	46	<0.5	13	5
Drainage and Utilities Installation	4	35	34	<0.5	12	4
Paving	2	16	18	<0.5	1	1
Maximum Daily Emissions	6	64	46	<0.5	13	5
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Significant Impact?	No	No	No	No	No	No

Source: HELIX 2020a

ROG = reactive organic gas; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter; SCAQMD = South Coast Air Quality Management District

Operational Impacts

Project emissions would be limited to construction, as the project involves widening and improving an existing roadway to accommodate existing and future projected traffic volumes, and would not generate new vehicle trips itself. Therefore, no operational impacts would occur.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Impacts to sensitive receptors would have the potential to occur as a result of criteria pollutant and toxic air contaminant (TAC) emissions during construction.

Criteria Pollutants

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's LST method (SCAQMD 2015). 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; they are developed based on the ambient concentrations of that pollutant for each Source Receptor Area (SRA). The LST methodology is recommended to be limited to projects of five acres or less and to avoid the need for complex dispersion modeling. For projects that exceed five acres, such as the proposed project, the five-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a five-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project

exceeds the LST look up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The project is in SRA 26, Temecula Valley, and sensitive receptors are located within 25 meters along the one-mile project site. Therefore, the LSTs being applied to the project are based on SRA 26, receptors located within 25 meters, and a disturbed area not to exceed 5 acres. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. As shown in Table 3, *Maximum Localized Daily Construction Emissions*, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs.

Table 3
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

Phase	Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Site Preparation	26.89	24.13	11.28	3.29
Grading	62.60	43.48	12.67	4.54
Drainage and Utilities Installation	34.24	31.81	11.76	3.76
Paving	14.79	16.59	0.82	0.76
Maximum Daily Emissions	62.60	43.48	12.67	4.54
<i>SCAQMD LSTs</i>	<i>371</i>	<i>1,965</i>	<i>13</i>	<i>8</i>
Significant Impact?	No	No	No	No

Source: HELIX 2020a

NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

For two or more projects within close proximity, that is, defined as 1,640 feet (500 meters)¹ or less from the same sensitive receptor, a local cumulative analysis must be performed. The on-site emissions from the related project must be added to the background concentration, which is then summed with the proposed project emissions for comparison to the SCAQMD LSTs or State and federal AAQS. If the related projects combine with the proposed project to result in an exceedance of the ambient standards, the project is considered cumulatively significant.

If approved, the proposed Sky Canyon Retail Center Project (Sky Canyon), located at the vacant lot northeast of the intersection of Highway 79 and Willows Avenue, could have a construction schedule that overlaps with the proposed project. Sensitive receptors that would be within 500 meters of both projects are residences located south of the easternmost length of the proposed project and west of Sky Canyon. If both projects are approved, construction could potentially overlap for the duration of the proposed project's construction schedule. However, due to the location of the two proposed projects, it would be impossible for the identified sensitive receptors to be downwind of both projects at the same time. That is, to be affected by the proposed project, the wind would have to be blowing from the north, and to be affected by Sky Canyon, the wind would have to be blowing from the east. Additionally, as detailed in Table 3, localized construction emissions would fall below the SCAQMD regional significance

¹ 500 meters is the greatest distance identified by the SCAQMD in their LST methodology.

thresholds. Therefore, emissions would not be cumulatively considerable, and impacts would be less than significant.

Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be related to diesel particulate matter associated with heavy equipment operations during earth-moving activities. SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the proposed project would be sporadic, transitory, and short term in nature; lasting approximately eleven months. The assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust would be well below the 30-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons. As such, project-emission impacts during construction would be less than significant.

CO Hotspots

Vehicle exhaust is the primary source of CO. In an urban setting, the highest CO concentrations are generally found within close proximity to congested intersections, where vehicle are idling. As the project involves widening and improving an existing roadway to accommodate existing and future projected traffic volumes, and would not generate new vehicle trips itself, the project would therefore not contribute additional traffic to a congested intersection. In addition, as discussed under Section XVII, *Transportation*, the project would reduce congestion along the roadway segments and at intersections and allow for more free flowing traffic than without the project. This would have the effect of reducing idling at intersections compared to conditions without the project, therefore lessening the potential for a CO hotspot. There would be no impact from CO hotspots.

- d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Less than Significant Impact. The project could produce odors during proposed construction activities resulting from heavy diesel equipment exhaust and application of asphalt; however, standard construction practices would minimize the odor emissions and their associated impacts. The increase of construction odors would be minimal, as vehicle exhaust is already prevalent in the area due to its proximity to Highway 79 and Interstate 215. Furthermore, odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of the respective phase of construction. Therefore, odor impacts from construction of the project would be less than significant.

The project proposes widening and improving an existing roadway to accommodate existing and future projected traffic volumes and would not generate new vehicle trips itself; therefore, there would be no change to the existing operational odors, and no impact would occur.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any applicable policies protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the General Biological Resources Assessment prepared for the proposed project by HELIX Environmental Planning, Inc. (HELIX 2020b; Appendix B).

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. As part of the General Biological Resources Assessment, HELIX conducted habitat assessments and biological surveys within the project alignment to determine the presence of sensitive plant and animal species.

Sensitive Plant Species

Twenty of the 23 sensitive plant species recorded in the vicinity of the project area are not considered to have potential to occur on site. The remaining three species were determined to have a low potential to occur on the project alignment based on the presence of mapped sandy soils and a small area of disturbed Riversidean sage scrub-buckwheat dominated community. None of the three species was observed during rare plant surveys conducted by HELIX and these species are therefore not expected to occur on site. No impacts to sensitive plant species would result from implementation of the project.

Sensitive Animal Species

Burrowing Owl

The project alignment and potential off-site staging areas are within a Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) Burrowing Owl Survey Area (Dudek and Associates 2003). HELIX conducted a Step I Burrowing Owl Habitat Assessment and Step II Focused Burrow and Burrowing Owl surveys on the project alignment and potential off-site staging areas. No burrowing owls or burrowing owl signs were observed on the project alignment or potential off-site staging areas; however, due to the presence of on-site burrows with potential to support burrowing owl, impacts would be potentially significant and mitigation measure BIO-1 would be implemented.

Nesting Birds

The MSHCP does not cover impacts to nesting birds that are protected under the Migratory Bird Treaty Act (MBTA). Development of the project could disturb or destroy active migratory bird nests, including eggs and young, if construction occurs during the bird breeding season (January 15 to September 15). Such disturbance would be in violation of the MBTA and CDFW Fish and Game Code and would result in a significant impact. Therefore, impacts to nesting birds would be potentially significant and mitigation measure BIO-2 would be implemented.

Other Sensitive Animal Species

Nine of the 18 sensitive animal species recorded in the vicinity of the project area are not considered to have potential to occur on site. The remaining nine species were determined to have a low potential to occur on site based on the presence of suitable habitat. Eight of these species are either covered or conditionally covered under the MSHCP, compliance with which is described below under response IV.f. The Dulzura pocket mouse, which is a California Species of Special Concern and is not a federal or state listed endangered or threatened species, is not covered. No sensitive animals were found to be present on the project alignment or potential off-site staging areas. The project alignment and potential off-site staging areas are within a Stephens' Kangaroo Rat Habitat Conservation Plan area; therefore, the project has the potential to impact Stephens' kangaroo rat or associated habitat. The project applicant will pay a Stephens' kangaroo rat mitigation fee in accordance with the Stephens' Kangaroo Rat Habitat Conservation Plan. The Stephens' Kangaroo Rat Habitat Conservation Plan fee for the project will be determined in coordination with the County. Therefore, with compliance with the MSHCP, the absence of sensitive animals during the biological surveys, and payment of the Stephens' Kangaroo Rat Habitat Conservation Plan fee, impacts to sensitive animal species would be less than significant.

Mitigation Measures

Implementation of the mitigation measure BIO-1 would reduce potentially significant impacts to burrowing owls to less than significant:

- BIO-1** Within 30 days prior to initiating ground-disturbance activities, the project applicant shall retain a qualified biologist to complete a pre-construction avoidance survey, in accordance with the MSHCP guidelines. If the pre-construction survey is negative and burrowing owl is confirmed absent, then ground-disturbing activities shall be allowed to commence and no further mitigation would be required. If burrowing owls have colonized the project alignment or staging areas prior to initiation of construction, the project applicant shall immediately inform the Western Riverside County Regional Conservation Authority (RCA) and the Wildlife Agencies. Preparation of a *Burrowing Owl Protection and Relocation Plan* prior to initiating ground disturbance may be required by the RCA and/or the Wildlife Agencies.

Implementation of mitigation measure BIO-2 would reduce potentially significant impacts to nesting birds to less than significant:

- BIO-2** Vegetation clearing for the project, including off-site staging areas, shall be conducted outside the avian nesting season, which is generally defined as January 15 to September 15, to the extent feasible. If vegetation clearing must take place during the nesting season, a qualified biologist shall perform a pre-construction Nesting Bird Survey no more than seven days prior to vegetation impacts. Results of the survey shall be submitted to the City for review and approval prior to initiating impacts during the breeding season.

If active bird nests are confirmed to be present during the pre-construction survey, the project biologist shall delineate a buffer of up to 300 feet (500 feet for raptors) around each nest. Construction activities within the buffer shall not be permitted until nesting behavior has ceased, nests have failed, or young have fledged. The project biologist may modify the buffer or propose other recommendations in order to minimize disturbance to nesting birds.

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

Less than Significant Impact. Five vegetation communities/land cover types occur within the project alignment and potential off-site staging areas, including: developed land, disturbed land, non-native grassland, ornamental/exotic, and Riversidean sage scrub – buckwheat dominated (disturbed form).

The project would permanently impact approximately 10.1 acres and temporarily impact approximately 3.2 acres within the off-site staging areas. The temporary impacts conservatively assume that all three potential staging areas would be used. The majority of proposed impacts (approximately 61 percent) are within developed land located in the existing limits of the City right-of-way. Impacts to developed land, disturbed land, and ornamental/exotic are not considered significant. Impacts to sensitive vegetation communities would include 0.7 acre of permanent impacts and 1.0 acre of temporary impacts to non-native grassland, as well as 0.5 acre of permanent impacts to Riversidean sage scrub – buckwheat

dominated. Because the project is within an area (City) participating in the MSHCP, the project applicant is required to pay a Local Development Mitigation Fee (LDMF). The City will pay a LDMF to finance the acquisitions of conservation areas to provide habitat for MSHCP covered species (County 2003). The applicant will pay the LDMF as determined through coordination with the County. The fee schedule is adjusted annually by the RCA. Generally, road improvement projects are subject to a LDMF that is approximately five percent of the overall construction costs for the project that occurs outside of the existing roadway. Therefore, with payment to the LDMF, impacts to sensitive natural communities would be less than significant.

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

No Impact. The United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) regulate discharge of fill into waters of the U.S. under Section 404 and 401 of the Clean Water Act (CWA), respectively. The California Department of Fish and Wildlife (CDFW) regulates alterations to stream courses including adjacent riparian habitat areas under Section 1600 of the California Fish and Game Code. In addition, Section 6.1.2 of the Western Riverside County MSHCP requires an assessment of the potentially significant effects of a project on covered species occupying riparian/riverine areas and vernal pools. No potential jurisdictional waters or wetlands, including riparian/riverine systems, vernal pools, and ephemeral ponds, were observed on the project alignment during the preliminary jurisdictional assessment and habitat assessment surveys. A few concrete-lined features (i.e., v-ditches, concrete apron, and a trapezoidal ditch) are present within the project site; however, they are deemed non-jurisdictional because they are manmade features constructed in upland habitat (i.e., non-wetland), they convey storm water within uplands, and they do not represent historical/natural wetlands, waters, or drainages. The concrete-lined features are also not considered Riparian/Riverine under the MSHCP because they do not support habitat dominated by trees, shrubs, persistent emergent vegetation, or emergent mosses or lichens; do not accept flows from fresh water sources; and are artificially created or constructed features. Therefore, the project would not affect jurisdictional features, wetlands, riparian/riverine areas, or vernal pools, and no impacts would occur.

- 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?

No Impact. Wildlife movement corridors, or linkages, link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The project alignment and staging areas are located within an existing developed area which is not targeted for conservation. The project alignment and staging areas are not within or adjacent to a regional corridor or linkage; thus, no impacts to resident or migratory wildlife, including wildlife nursery sites, would occur. Additionally, the project alignment and staging areas do not contain aquatic habitat that would support resident or migratory fish; therefore, no impacts to fish would occur.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. Although the project alignment supports trees that are considered Protected Trees under Section 16.42 of the City's Municipal Code (City 2018), the majority of the project

alignment falls within the City's right-of-way. Removal of Protected Trees within the City's right-of-way would be allowed under Exemption D of Section 16.42. Removal of trees outside of the City's right-of-way is not anticipated; therefore, impacts would be less than significant.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less than Significant with Mitigation Incorporated. The applicable habitat conservation plan for the project is the Western Riverside MSHCP (Dudek and Associates 2003). Any project that is proposed within the boundaries of the MSHCP is required to pay a per-acre mitigation fee, which the project would pay (as described under response IV.b). The project was evaluated for consistency with the following MSHCP issue areas, and the results of the evaluation are summarized below (for the complete consistency analysis, refer to the General Biological Resources Assessment [HELIX 2020b], included as Appendix B):

- MSHCP Reserve Assembly requirements;
- 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/Wildlands Interface);
- Section 6.3.2 (Additional Survey Needs and Procedures); and
- Section 6.4 (Fuels Management).

MSHCP Reserve Assembly Requirements

The majority of the project is not located within a Criteria Cell. The westernmost portion of the project alignment (from approximately just west of Via Princesa to Margarita Road, in addition to the westernmost staging area located in a vacant lot) is located within Criteria Cell 6182, which focuses conservation efforts on the western portion of the cell and Warm Springs Creek. The project alignment, located in the eastern portion of the cell, is not adjacent to or associated with Warm Springs Creek. In addition, the improvements that occur within Criteria Cell 6182 do not include road widening or other substantial ground disturbances, as the improvements in this area include restriping and minor sidewalk improvements, and potential staging activities in a vacant lot. No improvements would occur within sensitive habitat in the cell. Therefore, implementation of the project would not substantially affect habitats with connectivity to Warm Springs Creek and would not conflict with conservation goals of Criteria Cell 6182.

Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools)

The project alignment and off-site staging areas do not support riparian/riverine areas or vernal pools. Suitable habitat for riparian/riverine and vernal pool plant, invertebrate, or bird species is not present within the project alignment or off-site staging areas. Therefore, no impacts would occur to riparian/riverine areas or vernal pools or associated species and the proposed project is consistent with Section 6.1.2 of the MSHCP.

Section 6.1.3 (Protection of Narrow Endemic Plant Species)

The project is not within a Narrow Endemic Plant Species Survey Area (NEPSSA); therefore, no surveys were warranted. In addition, no suitable habitat for NEPSSA species occurs on the project alignment or

off-site staging areas and no impacts would occur as a result of the project. The proposed project is consistent with Section 6.1.3 of the MSHCP.

Section 6.1.4 (Guidelines Pertaining to Urban/Wildlands Interface)

Section 6.1.4 of the MSHCP addresses potential indirect impacts to MSHCP Conservation Area lands via the Urban/Wildlands Interface Guidelines. The project alignment does not occur adjacent to an MSHCP Conservation Area: the nearest Conservation Areas include Proposed Constrained Linkage 15 (Warm Springs Creek) located approximately 0.12 mile to the west and Proposed Core-2 (Tucalota Creek) located approximately 0.17 mile to the east. The project is within a MSHCP Criteria Cell; however, the project alignment is located mostly within an existing developed area, is a MSHCP Covered Activity, and is not targeted for conservation. In addition, the project would include measures to prevent and/or reduce urban/wildlands interface impacts to the nearby Conservation Areas. Potential urban/wildlands interface impacts applicable to the project relate to drainage, toxics, lighting, invasive plant species, barriers, and grading/land development.

The project would connect to the City's existing storm drain system, which would capture on-site stormwater and convey it to an off-site location. Stormwater from the site could ultimately reach the downstream Warm Springs Creek or Tucalota Creek Conservation Areas. To address this potential issue, the project would adhere to the Construction Guidelines in Section 7.5.3 of the MSHCP and would incorporate measures, including general construction BMPs and those required through the NPDES to ensure that the quantity and quality of runoff discharged off site is not altered in an adverse way when compared with existing conditions. The BMPs would also limit toxics, such as oils and other products associated with impervious road surfaces and cars, and would minimize impacts to the off-site Conservation Areas.

The project would involve interim erosion control and revegetation. If invasive species are used for erosion control or revegetation, potentially significant impacts would result. Therefore, the project would implement mitigation measure BIO-3, as described below.

Although the project involves grading/land development and proposes the installation of street lighting and retaining walls, the project alignment does not occur close enough (i.e., within 500 feet) to a Conservation Area to result in grading-, light-, or barrier-related impacts.

Section 6.3.2 (Additional Survey Needs and Procedures)

The project alignment and off-site staging areas are not located in a Criteria Area Species Survey Area (CASSA) or an amphibian or mammal survey area. Therefore, project impacts to CASSA species or sensitive amphibian or mammal species are not anticipated. The project is located within a Burrowing Owl Survey Area and protocol burrowing owl surveys were conducted. No burrowing owl or sign of the species was detected during the survey. Although the surveys were negative and potential burrowing owl habitat within the project alignment itself is of low quality and limited/restricted in size along the roadway, the potential for burrowing owl to be present on site at the time of construction exists. Therefore, the project would implement mitigation measure BIO-1 to reduce impacts to a less-than-significant level and to ensure consistency with Section 6.3.2 of the MSHCP.

Section 6.4 (Fuels Management)

Because the proposed project consists of widening an existing roadway within a developed portion of the City, a fuel modification zone is not incorporated into project. The project alignment is not adjacent to an MSHCP Conservation Area. Therefore, fuel modification impacts would not extend into a Conservation Area. The proposed project is consistent with Section 6.4 of the MSHCP.

Mitigation Measures

- BIO-3** In accordance with MSHCP Section 6.1.4, no species listed in Table 6-2 of the MSHCP (Appendix C of the MSHCP) shall be used on the project alignment or off-site staging areas, including hydroseed mix used for interim erosion control.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the Cultural Resources Study prepared for the proposed project by HELIX (HELIX 2020b, Appendix C).

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. As part of the Cultural Resources Study (HELIX 2020b), a records search of the California Historical Resources Information System was performed at the Eastern Information Center on June 21, 2018 for archaeological and historical sites within a 1-mile radius of the project site. The records search indicated 10 previously recorded cultural resources, including five archaeological sites, three archaeological isolates, one historic complex, and one multicomponent site. The historic resource is the Murrieta Hot Springs resort and spa, with buildings and features dating from 1904 through the 1930s. The historical components of the multicomponent site includes historic features, foundations, and artifacts associated with the Temecula Hot Springs Resort, dating from the 1930s to 1970s. The property is now a Christian Retreat Center and is located north of the westernmost project alignment. Neither historic resource is recorded within the project site. As such, the implementation of the project would not cause a substantial adverse change in the significance of a historical resource, and no impacts would occur.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant with Mitigation Incorporated. As mentioned in response V.a, above, the records search indicated five archaeological sites, three archaeological isolates, and one multicomponent resource within a 1-mile radius of the project site. The archaeological resources are associated with food processing: bedrock milling features and ground stone artifacts (manos and metates); flaked stone debitage was noted at only one of these sites. The multicomponent resource includes manos and metate fragments, pestles, and some flaked stone material, including one Cottonwood series projectile point. None of the archaeological material is recorded within the project site.

HELIX contacted the Native American Heritage Commission (NAHC) on June 18, 2018 for a Sacred Lands File (SLF) search and list of Native American contacts for the project area. The NAHC indicated in a response dated June 21, 2018 that the SLF search was negative, but that the area is sensitive for cultural resources. Letters were sent on June 26, 2018 to Native American representatives and interested parties identified by the NAHC. Six responses have been received to date. Responses received from the Pechanga, Soboba, and Rincon tribes indicated the importance of the area to the Luiseño people. Pechanga noted that the project is located within an area proposed as a Traditional Cultural Property, and that although the area is generally disturbed, there are some areas where cultural material might still be present. The other three tribes who responded noted that the project area is outside their Traditional Use Area but that tribes closer to the project area should be contacted.

A pedestrian survey was conducted at the project alignment by HELIX and a Native American monitor on June 25, 2018. Most of the project alignment and surrounding area is built upon and paved, thus reducing the likelihood for the presence of archaeological resources. The survey covered two large open areas located adjacent to the southern boundary of the project site. One of the areas is heavily disturbed and the other is regularly mowed. An additional field survey was conducted on January 6, 2020 to analyze a third open space area, located on the west side of Margarita Road, south of Murrieta Hot Springs Road. No cultural material was observed during either of the surveys; however, the project area does contain areas of young alluvial fan deposits, within which cultural resources may be present.

Based on the presence of young alluvial deposits, the NAHC's indication of cultural sensitivity, and tribal importance of the project area, cultural resources may be present within the project site. Grading and other ground-disturbing activities would therefore have the potential to cause a substantial adverse change in the significance of an archaeological resource, and impacts would be potentially significant. Therefore, the project would implement an archaeological and Native American monitoring program, as detailed in mitigation measures CUL-1 through CUL-5, to reduce impacts to less than significant.

Mitigation Measures

Implementation of mitigation measures CUL-1 through CUL-5 would reduce potentially significant impacts to cultural resources to a less-than-significant level:

- CUL-1** At least 30 days prior to the start any ground-disturbing activities, the City shall contact the Consulting Tribe to develop a Cultural Resources Treatment and Monitoring Agreement ("Agreement"). The Agreement shall address the treatment and final disposition of any tribal cultural resources, sacred sites, human remains, or archaeological resources inadvertently discovered on the project site; project grading, ground disturbance, and development scheduling; the designation, responsibilities, and

participation of tribal monitor(s) during grading, excavation, and ground disturbing activities; and compensation for the tribal monitors, including overtime, weekend rates, and mileage reimbursements. The Tribal Monitor shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.

CUL-2 A qualified archaeologist and tribal monitor shall attend a pre-construction meeting with City staff, the contractor, and appropriate subcontractors to discuss the monitoring program, including protocols to be followed in the event that cultural material is encountered.

CUL-3 A qualified archaeological monitor and a tribal monitor shall be present for ground-disturbing activities. At least seven business days prior to project grading, the City shall contact the Consulting Tribe and archaeologist to notify them of grading/excavation and the schedule, and to coordinate with the Tribe and archaeologist on the work schedule. Both the archaeologist and the tribal monitor shall have the authority to stop and redirect grading activities in order to evaluate the nature and significance of any archaeological resources discovered within the Area of Potential Effect (APE).

CUL-4 If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Consulting Tribe.

- i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the contractor, the archaeologist, the tribal representative(s) and the City to discuss the significance of the find.
- ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representative(s) and the archaeologist, a decision shall be made, with the concurrence of the City, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.
- iii. Grading or further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal monitors if needed.
- iv. Treatment and avoidance of the newly discovered resources shall be consistent with the mitigation measures for the project. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition.

- v. If the find is determined to be significant and avoidance of the site cannot be achieved, a Phase III data recovery plan shall be prepared by the project archaeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.
- vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the appropriate mitigation for the archaeological or cultural resources, these issues will be presented to the City Planning Director for decision. The City Planning Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archaeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City shall be appealable to the Planning Commission and/or City Council.

CUL-5

Disposition of Cultural Resources: In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

- a) One or more of the following treatments, in order of preference, shall be employed with the tribes.
 - i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.
 - ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.
 - iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial

goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.

CUL-6 The City shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts that are found within the project area, for proper treatment and disposition pursuant to the Agreement required in mitigation measure CUL-1 and CUL-5.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation Incorporated. No human remains are known to exist within the project area. However, although unlikely, it is possible that ground disturbance associated with the proposed project may encounter and damage or destroy previously undiscovered human remains. Therefore, impacts are assessed as potentially significant, and the project would implement mitigation measure CUL-7.

Mitigation Measures

Implementation of mitigation measure CUL-6 would reduce potentially significant impacts related to the discovery of human remains to less than significant:

CUL-7 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to 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. If the Riverside County Coroner determines the remains to be Native American, the NAHC must be contacted within 24 hours. The NAHC must then immediately identify the most likely descendant(s) for purposes of receiving notification of discovery. The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

VI. ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the Air Quality, Greenhouse Gas Emissions, and Energy Assessment prepared for the proposed project by HELIX Environmental Planning, Inc. (HELIX 2020a; Appendix A)

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. Energy usage is typically quantified using the British thermal unit (Btu) and large quantities of energy are often reported as million Btu (MBtu). As a point of reference, the approximate amounts of energy contained in common energy sources are gasoline – 0.124 MBTU per gallon and diesel – 0.139 MBtu per gallon.

The project would involve the consumption of energy resources during construction. Construction of the project is estimated to last approximately 11 months during which time diesel and gasoline fuel is anticipated to be the primary energy consumed. It is not anticipated that the project would require significant use of natural gas or electricity (from the electrical grid) during construction. As a result, natural gas and electricity use during construction would be temporary and a negligible portion of the total construction energy. Diesel and gasoline fuel consumption would be associated with heavy-duty equipment, haul trucks involved in the transport of soil and construction materials, and workers commuting to and from the site.

The project's estimated construction energy consumption was calculated using: off-road equipment types, horsepower, count and hours from the SMAQMD Road Construction Emissions Model version 9.0 (described in the air quality analysis, above); off-road fuel consumption factors from the CARB OFFROAD2017- ORION Web Database version 1.0.1; and on-road fuel consumption factors from the CARB EMFAC2107 Web Database version 1.0.2. The estimated fuel and total energy consumed during project construction is shown in Table 4, *Construction Energy Consumption*.

Table 4
CONSTRUCTION ENERGY CONSUMPTION

Phase	Fuel (gallons)		Total (MBtu)
	Diesel	Gasoline	
Grubbing/Land Clearing	4,503	217	653
Grading/Excavation	20,074	1,362	2,959
Drainage/Utilities/Sub-Grade	23,616	2,322	3,571
Paving	9,239	1,115	1,422
Construction Total	57,432	5,016	8,605

Source: HELIX 2020a.

Notes: Totals may not sum due to rounding; MBtu = million British thermal units.

The total petroleum consumption would be temporary and would cease upon completion of project implementation, would be typical of similar roadway construction projects, and would not require the development of new energy resources and distribution infrastructure. Once operational, the project would not result in any energy usage beyond the energy usage of the road segment without implementation of the project. Based on these considerations, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources and the impact would be less than significant.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact. Federal and state agencies regulate energy use and consumption through various means and programs. Federal and state agencies influence and regulate transportation energy

consumption through the establishment and enforcement of fuel economy standards for automobiles and light trucks, funding of energy-related research and development projects, and funding for transportation infrastructure improvements.

There are no state or local plans for renewable energy or energy efficiency directly applicable to the construction energy consumption from a roadway improvement project. However, a project's energy consumption is closely related to a project's GHG emissions. As described in the GHG analysis, below, the project's amortized GHG construction emissions would not exceed the SCAQMD threshold, and the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, including the City's CAP. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact would be less than significant.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the Geotechnical Exploration report prepared for the proposed project by Leighton Consulting, Inc. (Leighton 2010; Appendix D)

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Less than Significant Impact. The City, like the rest of southern California, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. The most significant known active fault zones that are capable of seismic ground shaking and can impact the City are the Elsinore Fault Zone, San Jacinto Fault Zone, Newport-Inglewood Fault Zone, and the San Andreas Fault Zone. As shown on Exhibit 12-3 of the City General Plan 2035 (City 2011b), the Elsinore Fault Zone is an Alquist-Priolo Earthquake Fault Zone that passes through the City to the west of Interstate 15. The fault is approximately two miles to the southwest of the project site. Due to this distance, it is unlikely that the project would be subjected to fault rupture at the Elsinore Fault Zone. Therefore, impacts would be less than significant.

- ii. Strong seismic ground shaking?

Less than Significant with Mitigation Incorporated. As described under response VI.a.i, the Elsinore Fault Zone is located approximately two miles southwest of the project site. This fault, and other faults in the region, could create seismic ground shaking at the project site. Ground-shaking could affect the integrity of the project's components (e.g., retaining walls, roadway, etc.); therefore, the proposed project would potentially be subject to severe ground shaking hazards from earthquake events. Accordingly, ground shaking could potentially result in significant impacts to the proposed project roadway structures. This impact would be mitigated through implementation of mitigation measure GEO-1.

- iii. Seismic-related ground failure, including liquefaction?

Less than Significant with Mitigation Incorporated. Liquefaction is the phenomenon where saturated granular soils develop high-pore water pressures during seismic shaking and behave like a heavy fluid. This phenomenon generally occurs in areas of high seismicity where groundwater is shallow and loose granular soils or hydraulic fill soils subject to liquefaction are present. For liquefaction to occur, loose

granular sediments below the groundwater table must be present and shaking of sufficient magnitude and duration must occur. As shown on Exhibit 12-5 of the City General Plan 2035 (2011b), small portions of the project alignment are located in areas of moderate liquefaction susceptibility (on a scale of moderate to very high). Therefore, portions of the project components (e.g., retaining walls, roadway, etc.) may be at risk from liquefaction, which could affect the integrity of the project components. Potentially significant impacts related to liquefaction would be mitigated through implementation of mitigation measure GEO-1.

iv. Landslides?

No Impact. As shown on Figure 5.8-6 of the City General Plan 2035 EIR, the site is not identified as being in an area where landslides have occurred. In addition, site topography is relatively flat and not beside steep slopes. Therefore, no impacts from landslides would occur.

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

Less than Significant Impact. Potential short-term erosion and sedimentation impacts would be addressed through a Stormwater Pollution Prevention Plan (SWPPP), prepared specifically for the proposed roadway improvements, in accordance with the NPDES permit. The SWPPP would incorporate BMPs in accordance with the California Stormwater Best Management Practices Handbook to control erosion and protect the quality of surface water runoff during project construction. Based upon compliance with the NPDES permit and implementation of a SWPPP, impacts would be less than significant.

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

Less than Significant with Mitigation Incorporated. See responses VI.a and VI.b, above. The project alignment is not located in an area that would be exposed to landslides. The project alignment has a moderate potential for liquefaction and is located near earthquake faults that may generate strong seismic ground shaking (City 2011b); therefore, the project components (e.g., retaining walls, roadway, etc.) may be exposed to unstable geologic conditions, and impacts would be potentially significant. Implementation of mitigation measure GEO-1 would reduce impacts to less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact. Expansive soils are soils subject to volumetric fluctuations in response to changes in moisture content (wetting and drying). Expansive soils have a substantial amount of clay particles, which can both release water (shrink) or absorb and hold water (swell). The soil underneath the project alignment is identified as a variety of sandy loam soil types, which have a low clay content and are not identified as having a shrink-swell potential (United States Department of Agriculture 2017). Therefore, impacts would be less than significant.

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

No Impact. As a roadway improvement project, the proposed project does not include septic tanks. No impacts would occur.

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

Less than Significant with Mitigation Incorporated. According to the City General Plan 2035 EIR (City 2011a), the San Bernardino County Museum Earth Sciences Division has classified the majority of the City as having a high potential for containing significant, nonrenewable paleontological resources. Formations in the Murrieta area have yielded extensive fossil remains. Due to the generally high paleontological sensitivity of the project area, a Paleontological Technical Study was prepared for the proposed project (Paleo Solutions, Inc. 2020; Appendix E).

The technical study involved an analysis of existing paleontological data as well as a field survey of the project site. Geologic mapping indicates that the project area is primarily underlain by Pleistocene- to late Pliocene-age sandstone and conglomerate of the Wildomar area, sandstone unit (QTsw); Pleistocene-age Pauba Formation, sandstone member (Qpfs); and Holocene- and latest Pleistocene-age young alluvial fan deposits (Qyfa). Within a half mile of the project area, Cretaceous-age gabbro igneous rocks (Kgb), middle to early Pleistocene-age very old alluvial channel deposits (Qvoaa), and Holocene- to latest Pleistocene-age young alluvial channel deposits (Qyaa) are also present and may underlie the geologic units mapped at the surface within the project area at shallow depth. In addition, recent artificial fill (af) from previous development may be present within the bounds of the project area. Of these geologic units, one, the Pleistocene-age Pauba Formation, sandstone member, has a high paleontological potential. Two units, the Pleistocene- to late Pliocene-age sandstone and conglomerate of the Wildomar area and the middle to early Pleistocene-age very old alluvial channel deposits, have moderate paleontological potentials. The remaining four units have either low or very low paleontological potentials. Due to the presence of geologic units with moderate and high paleontological potentials, grading and other ground-disturbing activities associated with construction of the proposed project would have the potential to destroy a paleontological resource, and impacts would be potentially significant. Therefore, the project would implement a paleontological monitoring program, as detailed in mitigation measures PAL-1 and PAL-2.

Mitigation Measures

The following mitigation measure GEO-1 would mitigate the potentially significant impacts associated with seismic hazards identified under this section to less than significant.

GEO-1 Site-specific Geotechnical Investigation. A site-specific geotechnical investigation shall be completed prior to final site design approval by the City to identify site-specific criteria related to considerations such as grading, excavation, fill, and structure/facility design. All applicable results and recommendations from the geotechnical investigation will be incorporated into the project design and construction documents to address identified potential geologic and soil hazards, including but not necessarily limited to: (1) seismic hazards including ground rupture, ground acceleration (ground shaking), soil liquefaction (and related issues such as dynamic settlement and lateral spreading), landslides/slope instability, and seiche effects; and (2) non-seismic hazards including manufactured slope instability, subsidence/compressible soils, expansive or corrosive

soils, and trench/excavation instability. The final project design and construction documents will also encompass applicable standard design and construction practices from established regulatory/ industry sources including the California Building Code (CBC), International Building Code (IBC), California Geological Survey (CGS), Greenbook standards, as well as the results/recommendations of geotechnical review and field observations/testing to be conducted during project excavation, grading, and construction activities (with all related requirements to be included in applicable engineering/design drawings and construction contract specifications).

Implementation of the following mitigation measures PAL-1 and PAL-2 would reduce potentially significant impacts to paleontological resources to less than significant:

PAL-1 Prior to construction, a paleontological resource impact mitigation program (PRIMP) should be prepared if deemed appropriate by the City. It should provide detailed recommended monitoring locations; a description of a paleontological resources worker environmental awareness program to inform construction personnel of the potential for fossil discoveries and of the types of fossils that may be encountered; detailed procedures for monitoring, fossil recovery, laboratory analysis, and museum curation; and notification procedures in the event of a fossil discovery by a paleontological monitor or other project personnel. In the event that paleontological resources are discovered during the construction phase of the Project, a curation agreement from the WSC, or another accredited repository, will be obtained.

PAL-2 Construction excavations that disturb Pleistocene- to late Pliocene-age sandstone and conglomerate of the Wildomar area, sandstone unit; Pleistocene-age Pauba Formation, sandstone member; and middle to early Pleistocene-age very old alluvial channel deposits shall be monitored full-time by a qualified paleontologist. Additionally, artificial fill, young alluvial fan deposits, and young alluvial channel deposits shall be initially spot-checked to determine if older, more paleontologically sensitive deposits are disturbed at depth. If older sedimentary geologic units are not disturbed by construction activities in these areas, then monitoring can be reduced or ceased at the discretion of a qualified paleontologist in consultation with the City.

VIII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the Air Quality, Greenhouse Gas Emissions, and Energy Assessment prepared for the proposed project by HELIX Environmental Planning, Inc. (HELIX 2020a; Appendix A).

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

Less than Significant Impact. Greenhouse gases (GHG) include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). GHGs vary widely in the power of their climatic effect; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO₂. For example, since CH₄ and N₂O are approximately 25 and 298 times more powerful than CO₂, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO₂ has a GWP of 1). Carbon dioxide equivalent (CO₂e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO₂e.

There are no established federal, state, or local quantitative thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. The California Air Resources Board (CARB), the SCAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. For the proposed project, the most appropriate screening threshold for determining GHG emissions is the SCAQMD proposed Tier 3 screening threshold (SCAQMD 2010), as the project construction period and equipment is similar to a commercial or residential project to which Tier 3 applies. Therefore, a significant impact would occur if the proposed project would exceed the SCAQMD proposed Tier 3 screening threshold of 3,000 metric tons (MT) of carbon dioxide equivalent (CO₂e) per year.

Construction Impacts

Construction GHG emissions would be generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, and worker commuting trips. Construction GHG emissions were calculated by using SMAQMD Roadway Construction Emissions Model Version 9.0. The estimated construction GHG emissions for the project are shown in Table 5, *Estimated Greenhouse Gas Emissions*. For construction emissions, SCAQMD recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 23 MT CO₂e emissions per year. Therefore, the proposed project would generate GHG emissions below the SCAQMD threshold and impacts would be less than significant.

Table 5
ESTIMATED GREENHOUSE GAS EMISSIONS

Phase	CO₂e (MT)
Site Preparation	48
Grading	205
Drainage and Utility Installation	319
Paving	106
Total Emissions	678
Amortized Emissions	23
<i>SCAQMD Threshold</i>	<i>3,000</i>
Significant Impact?	No

Source: HELIX 2020a

CO₂e = carbon dioxide equivalent; MT = metric tons; SCAQMD = South Coast Air Quality Management District

Operational Emissions

Project emissions would be limited to construction, as the project involves widening and improving an existing roadway to accommodate existing and future projected traffic volumes, and would not generate new vehicle trips itself. Therefore, no operational impacts would occur.

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

Less than Significant Impact. There are numerous state plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall state plan and policy is Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. Senate Bill (SB) 32 would require further reductions of 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the low carbon fuel standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed.

The City prepared a Climate Action Plan (CAP), which provides a framework for reducing GHG emissions and managing resources to best prepare for climate change (City 2011c). The CAP recommends GHG emissions targets that are consistent with the reduction targets of California and presents a number of strategies that will make it possible for the City to meet the recommended targets. The CAP is intended to address the main sources of the emissions that cause climate change, which include emissions from the energy consumed in buildings and for transportation, as well as the solid waste sent to landfills. The purpose of the CAP is to guide the development, enhancement, and ultimately the implementation of actions that will reduce the City's GHG emissions by 15 percent below existing levels. The City's emission reduction targets were set at a level that demonstrates consistency with state targets and provides feasibility for the majority of projects to achieve. Therefore, consistent with the CARB Scoping Plan and AB 32 goals, the City chose a reduction target of 15 percent below current (2009 baseline) emissions levels by 2020. This reduction trend would continue through the General Plan buildout year of 2035. Seven Climate Action Strategies (CAS) are devised to assist the City in reaching its reduction target. These strategies include: CAS 1 – Community Involvement; CAS 2 – Land Use and Community Vision;

CAS 3, Transportation and Mobility; CAS 4 – Energy Use and Conservation; CAS 5 – Water Use and Efficiency; CAS 6 – Waste Reduction and Recycling; and CAS 7 – Open Space.

One of the primary uses for a CAP is to establish significance thresholds for reviewing projects under CEQA. CEQA requires the City to identify the significant environmental impacts of its discretionary actions and to avoid or mitigate those impacts if feasible. The CEQA Guidelines, as updated pursuant to SB 97, acknowledge that climate change is an environmental issue that requires analysis under CEQA and encourage the use of a plan consistency threshold for cumulative impacts on climate change. Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the CAP would have a less-than-significant impact related to GHG emissions. The CAP is intended to reduce the City's impact on climate change; therefore, determining the consistency of a proposed project with the CAP is a method to evaluate whether a project would have a significant climate change impact. This approach is consistent with CEQA Guidelines Section 15183.5, which allows jurisdictions to analyze and mitigate the significant effects of GHGs at a programmatic level, by adopting a plan for the reduction of GHG emissions.

When determining whether a proposed project is consistent with the CAP, the following should be considered:

- The extent to which the project supports or includes applicable strategies, goals, and measures, or advances the actions identified in the CAP;
- The consistency of the project with the General Plan population growth projections, which are the basis of the GHG emissions inventory projections;
- The consistency of the project with the emission reduction targets set by the CAP; and
- The extent to which the project would interfere with implementation of CAP strategies, measures, or actions.

The project would support and promote CAS 3, Transportation and Mobility, by providing roadway improvements that would include the installation of bicycle lanes and pedestrian sidewalks, and by widening the roadway to improve circulation and reduce congestion. The applicable CAP measures include:

- CIR 8 – Development, expansion, and maintenance of a network of bicycle, pedestrian, and multi-use trails that allows residents to travel between parks, schools, neighborhoods, and other major destinations without driving; and
- AQ 5 – Air quality is improved through an efficient circulation system, reduced traffic congestion, and reduced vehicle miles traveled (City 2011c).

With these improvements, the proposed project would decrease congestion and reduce time spent in traffic, thus generating fewer GHG emissions and supporting the CAP. Additionally, the project would not conflict with the remaining CAS: CAS 1 – Community Involvement; CAS 2 – Land Use and Community Vision; CAS 4 – Energy Use and Conservation; CAS 5 – Water Use and Efficiency; CAS 6 – Waste Reduction and Recycling; and CAS 7 – Open Space. Therefore, because the proposed project would support CAS 3, and would not interfere with the other identified CAS, it would be considered consistent with the City's emission reduction targets.

In addition, as the project involves widening and improving an existing roadway to accommodate existing and future projected traffic volumes, and would not generate new vehicle trips itself, the proposed project would not result in an increase to population or employment and would therefore be consistent with the growth projections in the GHG emissions inventory projections. As previously discussed, the project's increase in GHG emissions from construction activities would also not exceed the SCAQMD screening threshold, which was crafted to comply with the reduction goals of AB 32.

Therefore, the project would be consistent with the City's CAP and implementation of the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions; impacts would be less than significant.

IX. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Construction of the project may require the use of hazardous materials (fuels, lubricants, solvents, etc.), which would require proper storage, handling, use, and disposal. The use of these materials would be temporary and in accordance with applicable standards and regulations. Therefore, impacts would be less than significant.

- 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?

Less than Significant Impact. The proposed project is not anticipated to result in a release of hazardous materials into the environment. During the temporary, short-term construction period, there is the possibility of accidental release of hazardous substances such as spilling of hydraulic fluid or diesel fuel associated with construction equipment maintenance. The level of risk associated with the accidental release of these hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials. The construction contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment. Therefore, the impact of the proposed project with respect to exposing the public or the environment to hazardous materials through upset and accident conditions would be less than significant.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The school nearest to the project alignment is Warm Springs Middle School, located approximately 0.2 mile to the south of the project alignment. Although hazardous materials used during construction may be handled within one-quarter mile of the school, the potential use of these materials would be temporary and in accordance with applicable standards and regulations. Therefore, impacts related to the handling of hazardous materials within one-quarter mile of a school would be less than significant.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the SWRCB GeoTracker database (SWRCB 2015) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2018) were searched for hazardous materials sites within the project area. According to these databases, there are no listed hazardous materials sites within or adjacent to the project alignment. Therefore, no impact would occur.

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

No Impact. The project alignment is located within Compatibility Zones D and E of the French Valley Airport, which is located approximately 1.3 miles northeast of the project alignment. Compatibility Zones D and E limit certain land uses and structure heights (Riverside County Airport Land Use

Commission 2004). Because the proposed roadway improvements would not include structures or objects that would be of aviation concern, the project would not result in a safety hazard or excessive noise for people residing or working in the project area. The project is not located within the vicinity of a private airstrip. Therefore, no impacts would occur.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. During construction, certain lanes and/or parts of the roadway may be closed to vehicular traffic; however, a Traffic Control Plan would be implemented to identify traffic control measures through the duration of project construction activities. The Traffic Control Plan would maintain adequate access and the project would therefore not interfere with an emergency response plan or emergency evacuation plan.

Upon completion of construction, the improved roadway would include more lanes and would therefore allow for improved access to the surrounding areas. As such, impacts would be less than significant.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. As shown on Exhibit 12-8 of the City General Plan 2035 (City 2011b), the project alignment is not located within a high fire zone. In addition, according to the Very High Fire Hazard Severity Zones in Local Responsibility Area (LRA) map prepared by the California Department of Forestry and Fire Protection (CAL FIRE) for the City of Murrieta, the project site is not located within a Very High Fire Hazard Severity Zone (VHFHSZ; CAL FIRE 2009). Furthermore, the proposed roadway improvements would not house people and would not be at risk from wildlife. Therefore, no impacts would occur.

X. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. result in substantial erosion or siltation on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. 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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk or release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based in part on the Water Quality Management Plan prepared for the proposed project by SB&O, Inc. (SB&O 2020; Appendix F).

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. Potential water quality impacts associated with the proposed project would be generally limited to short-term construction-related erosion and sedimentation. During operation, the discharge of minor amounts of fuels or other pollutants associated with automobiles into storm drains during rain events may occur. As the roadway is widened, the project would construct gutters, catch basins, and storm drains in compliance with City design standards as described in Chapter 8.36 of the City Municipal Code (City 2018), which includes implementation of a project-specific Water Quality Management Plan (WQMP; SB&O 2020)). This would result in operational effects to water quality that are similar or improved compared to existing conditions. Therefore, operational impacts to water quality would be less than significant.

As required under the NPDES, a SWPPP would be created specifically for construction of the proposed roadway improvements. The plan would address erosion control measures that would be implemented to avoid or minimize erosion impacts to exposed soil associated with construction activities. The SWPPP would include a program of BMPs to provide erosion and sediment control and reduce potential impacts to water quality that may result from construction activities. BMPs would include maintaining existing slope stabilization measures, stabilizing all slopes greater than three feet in height, and providing inlet protection, gravel bags, and silt fences where applicable. Implementation of the SWPPP for the proposed roadway improvements and associated BMPs would reduce or eliminate the discharge of potential pollutants from stormwater runoff to the maximum extent practicable. Therefore, impacts would be less than significant.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact. Implementation of the proposed project would not result in the use of groundwater. While the proposed project would result in additional impervious surfaces on the site, the project size and small developed space would have a minimal effect on the existing groundwater infiltration. Therefore, the proposed project would not substantially interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin and impacts would be less than significant.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- i. result in substantial erosion or siltation on- or offsite;

Less than Significant Impact. No streams or rivers are present within the project alignment; therefore, the project would not alter the course of a stream or river. An increase in impervious surfaces resulting from the roadway improvements would alter the existing drainage pattern of the area in a manner that would increase the amount of surface runoff; however, the increase in the amount of runoff would be minimal and the runoff would be accommodated by the proposed gutters, catch basins, and storm drains, which would be designed in conformance with City design standards as described in Chapter 8.36 of the City Municipal Code (City 2018), which includes implementation of a project-specific WQMP (SB&O 2020). With implementation of the WQMP, substantial erosion and siltation would not occur on or off site. In addition, the proposed retaining walls would reduce erosion on sloped areas within and adjacent to the project alignment. Therefore, impacts would be less than significant.

- ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

Less than Significant Impact. No streams or rivers are present within the project alignment; therefore, the project would not alter the course of a stream or river. An increase in impervious surfaces resulting from the roadway improvements would alter the existing drainage pattern of the area in a manner that would increase the amount of surface runoff; however, the increase in the amount of runoff would be minimal and the runoff would be accommodated by the proposed gutters, catch basins, and storm drains, which would be designed in conformance with City design standards as described in Chapter 8.36 of the City Municipal Code (City 2018), which includes implementation of a project-specific WQMP (SB&O 2020). Therefore, flooding would not occur on or off site. Impacts would be less than significant.

- iii. 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; or

Less than Significant Impact. An increase in impervious surfaces resulting from the roadway improvements would increase the amount of surface runoff on site. This runoff may contain pollutants such as fuels and oils from automobiles; however, the increase in the amount of runoff would be minimal and the runoff would be sufficiently accommodated by the proposed gutters, catch basins, and storm drains. Therefore, the project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; impacts would be less than significant.

iv. impede or redirect flows?

Less than Significant Impact. An increase in impervious surfaces resulting from the roadway improvements would alter the existing drainage of the area in a manner that would change flows from existing conditions; however, the changes would be minimal. The project involves improvements to existing roadways, which would not substantially impede or redirect flows. Therefore, impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk or release of pollutants due to project inundation?

Less than Significant Impact. According to the Federal Emergency Management Agency (FEMA) Flood Map Service Center (FEMA 2017), the project site, except for a small area associated with a drain inlet near the intersection of Murrieta Hot Springs Road and Via Princesa, is mapped in Zone X, which signifies an area of minimal flood hazard. The portion associated with the drain inlet intersects the project alignment and runs parallel to its southern boundary between Via Princesa and Margarita Road. This portion is mapped as Zone A, which signifies a special flood hazard area; however, given that the entire project area aside from this isolated drain inlet is located outside of a flood hazard zone, it is not anticipated that the project would result in the release of pollutants due to inundation associated with mapped flood hazard areas.

As described on page 5.13-45 of the City General Plan 2035 EIR (City 2011a), the possibility of seiches and tsunamis impacting the City is considered remote due to the great distance to large bodies of water. Therefore, the potential for the project to result in the release of pollutants associated with inundation from tsunamis and seiches is considered remote. As such, impacts related to the release of pollutants due to project site inundation in flood hazard, tsunami, and seiche zones would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. As specified above, the project would comply with applicable City of Murrieta and County of Riverside stormwater requirements and would be required to obtain coverage under the NPDES General Construction Activity Permit. In addition, the project would not adversely impact a groundwater management plan because project-related runoff would not otherwise impede groundwater replenishment in the Murrieta-Temecula Groundwater Basin. In addition, as noted above in Checklist Question X.a, above, project implementation would not have the potential to result in significant adverse impacts to surface water and groundwater quality or otherwise conflict with or obstruct implementation of the Water Quality Control Plan for the San Diego Basin (Basin Plan).

XI. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Physically divide an established community?

No Impact. The project would improve an existing roadway and would not physically divide an established community. Therefore, no impacts would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant with Mitigation Incorporated. The Circulation Element of the City General Plan 2035 (City 2011b) includes estimated traffic volumes under buildout (2035) land uses. These traffic volumes were then used by the City to determine whether the City's existing circulation system can accommodate the future traffic demands of buildout. Based on the conclusions of the analysis, the City has identified changes to the roadway network that are deemed necessary to accommodate future traffic demands. One of the necessary changes identified by the City is the expansion of Murrieta Hot Springs Road from a 4-lane roadway to a 6-lane roadway, as seen on Exhibit 5-4 in the City General Plan 2035 (2011b). The project, which proposes to implement this improvement, is therefore consistent with the City General Plan 2035 (City 2011b). In addition, because the project would occur primarily within the expanded City right-of-way (the only improvements outside of the proposed right-of-way include minor alterations such as pole relocations), it would not conflict with the City's land use plan.

The project would also be consistent with City General Plan 2035 land use policies, such as:

- **CIR-1.11**, supporting the implementation of complete streets through a multi-modal transportation network (e.g., pedestrians and bicyclists). The proposed project would implement bicycle lanes and pedestrian sidewalks along both sides of the alignment to encourage multi-modal use.
- **CSV-7.1**, continue development review procedures that protect paleontological resources. See response VII.f; the project would protect paleontological resources through mitigation measures PAL-1 and PAL-2.
- **CSV-8.1**, facilitate the conservation of habitat areas and wildlife corridors under the MSHCP. See response IV.f; the project would be consistent with the MSHCP through mitigation measure BIO-1 and BIO-3, and required MSHCP and Stephens' kangaroo rat fees.

- **CSV-11.1**, promote the protection and preservation of cultural resources. See Section Vb; through mitigation measures CUL-1 through CUL-5, impacts to cultural resources would be less than significant.
- **N-3.1**, consider noise mitigation measures in the design of all future streets. As described under response XIII.a, the project would be in compliance with City noise regulations. In addition, the project's retaining walls would have the effect of reducing noise levels in certain areas compared to a no-project four-lane roadway.
- **SAF-2.1**, prior to site development, projects located in areas where liquefaction, subsidence, landslide, and fissuring are considered hazards shall be required to prepare geologic reports addressing site conditions and potential risk to the satisfaction of the City Engineer. As described under Section VII, the project would implement mitigation measure GEO-1 to complete a geotechnical investigation for the project.

Therefore, with implementation of mitigation measures, the project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant after mitigation.

XII. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. No active mining operations are present on or near the site. Implementation of the project would not interfere with the extraction of known mineral resources. Therefore, no impacts to known mineral resources would occur.

- 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?

No Impact. Although a geothermal resource is mapped adjacent to the project alignment on Exhibit 8-1 of the City General Plan 2035 (City 2011b), there are no mineral resource extraction operations within the City. No impacts to mineral resources delineated on a local general plan would occur.

XIII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following analysis is based on the Acoustical Analysis Report prepared for the proposed project by HELIX Environmental Planning, Inc. (HELIX 2020d; Appendix G).

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact.

Construction Noise

Construction of the project would generate elevated noise levels. The magnitude of the impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and intervening structures (if any).

Construction noise is regulated by Section 16.30.130 of the City's Municipal Code. Construction noise limits are shown in Table 6, *City of Murrieta Construction Noise Limits*, below.

Table 6
CITY OF MURRIETA CONSTRUCTION NOISE LIMITS

Period	Single-family Residential		Multi-family Residential		Commercial	
	Mobile Equipment ¹	Stationary Equipment ²	Mobile Equipment	Stationary Equipment	Mobile Equipment	Stationary Equipment
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	60 dBA	80 dBA	65 dBA	85 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	50 dBA	64 dBA	55 dBA	70 dBA	60 dBA

Source: City Municipal Code Section 16.30.130

¹ Mobile equipment is defined as nonscheduled, intermittent, short-term operations.

² Stationary equipment is defined as repetitively scheduled and relatively long-term operation periods (three days or more).

dBA = A-weighted decibel

The most substantial noise increases from construction activities that may affect off-site uses would occur during the grading phase. The loudest equipment used during this phase would be an excavator. Some grading may occur as close as 25 feet to multi-family residences off Murrieta Hot Springs Road. Over the course of a typical construction day, the equipment would be mobile along the horizontal alignment of the roadway and would average approximately 100 feet or greater from the nearest noise-sensitive land use (NSLU).

For modeling, it was assumed that excavator would be in operation at an average of 100 feet from the nearest NSLU throughout the construction day. The excavator would be in operation for 40 percent of a typical construction hour. At a distance of 100 feet, the excavator would generate a noise level of 70.7 A-weighted decibels (dBA) one-hour equivalent (L_{EQ}). Therefore, use of construction equipment during grading would not exceed the City Noise Ordinance construction threshold of 75 dBA L_{EQ} for mobile equipment. In addition, project construction would occur with the allowable hours in the City's Municipal Code (7:00 a.m. to 8:00 p.m.). As other project construction activities would be expected to use less intensive equipment, project construction noise would be consistent with the City Noise Ordinance and would be less than significant.

Operational Noise

The Noise Element of the City of Murrieta General Plan 2035 (City of Murrieta 2011) provides noise standards for land use compatibility in Murrieta. The normally acceptable exterior noise level in the City for a multi-family residential land use is 65 CNEL. The interior noise standard is 45 CNEL. For interior noise, a 15 dBA noise attenuation is assumed from the exterior-to-interior environment; therefore, if noise levels exceed 60 CNEL, they would be assumed to exceed 45 CNEL at the interior.

The project operational noise source would be vehicular traffic. Future traffic noise levels are based on forecasted traffic volumes provided in the project's Traffic Impact Analysis (TIA; Linscott, Law and Greenspan Engineers [LLG] 2020). Due to the forecasted traffic in the City General Plan 2035 (City 2011b), traffic volumes on Murrieta Hot Springs Road were forecasted to be the same under the long-term scenario for either a 4-lane roadway (no project) or a 6-lane roadway (proposed project). Therefore, the project's contribution to noise increases to the adjacent multi-family residences would be from moving the outer roadway lanes closer to the residences. In addition, the anticipated locations and

approximate heights for the project's retaining walls were added in the modeling for the 6-lane roadway.

A direct significant impact would occur if exterior and interior noise levels are exposed to a 3 dBA increase on roadways where the baseline noise level is less than 60 CNEL; a 2 dBA increase for roadways where the baseline noise level is 60 to 64 CNEL; and a 1-dBA increase for roadways where the baseline noise level is 65 CNEL or over. As shown in Table 5 of Appendix G, the majority of the receivers modeled at the multi-family residences would be exposed to noise levels in excess of 65 CNEL under both existing and future noise levels with a 4-lane roadway (the "no project" scenario). For these receivers, the greatest noise increase due to the widened 6-lane roadway would be 0.9 CNEL, which would be below the 1 dBA noise increase threshold. In addition, some locations would see minor to substantial noise attenuation due to the project's retaining walls providing attenuation of vehicle noise, especially for vehicles located on the outermost lanes adjacent to the walls. For the receivers with noise levels below 65 CNEL for the 4-lane alignment, noise levels would slightly increase (with the largest noise increase for these receivers being 0.2 CNEL) or would be reduced and would not exceed thresholds.

For interior noise, although interior noise levels at the residences would exceed 60 CNEL at the majority of receivers, and therefore potentially be exposed to noise levels above the 45 CNEL interior noise threshold, the project's contribution would be the same as described above (i.e., it would not exceed a 1 dBA increase for noise levels already exceeding 65 CNEL or it would not exceed a 2 dBA increase for noise levels already exceeding 60 CNEL). For the receivers below 60 CNEL, the project would not increase their noise levels above 60 CNEL.

Therefore, transportation noise impacts to exterior and interior noise from the proposed project would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project, as all piles would be drilled and cast in place, which would generate nominal vibration. A possible source of vibration during general project construction activities would be a vibratory roller, which may be used at a distance of 25 feet from the nearest off-site residence. A vibratory roller would create approximately 0.210 inch per second peak particle velocity (PPV) at a distance of 25 feet (Caltrans 2013). This would be lower than what is considered a "severe" impact for humans of 0.4 inch per second PPV, and the structural damage impact threshold to older residential structures of 0.5 inch per second PPV. Therefore, although a vibratory roller may be perceptible to nearby human receptors, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

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

No Impact. The nearest airport is the French Valley Airport, located approximately 1.3 miles northeast of the project alignment. The 65 CNEL contour for the airport is located approximately 1.1 miles north of the project (Coffman Associates, Inc. 2009). The project is not located within the vicinity of a private airstrip. Therefore, airport noise would not create substantial noise at the project site, no impacts associated with airports would occur.

XIV. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact. The City General Plan 2035 (City 2011b) recommends that the portion of Murrieta Hot Springs Road which the project includes be expanded to six lanes in order to accommodate traffic levels projected under buildout of the General Plan 2035. Therefore, although the project involves the expansion of infrastructure, it would accommodate planned growth rather than induce growth. The project does not include land uses, such as homes or business, that would directly induce population growth. As such, the project would not induce direct or indirect population growth, and impacts would be less than significant.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would involve improvements to an existing roadway. There are no existing residences within the project alignment and no people or housing units would be displaced. No impact would occur.

XV. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

a) Fire protection?

Less than Significant Impact. Operation of the roadway improvements would not generate an increased demand for fire protection services beyond existing conditions. During construction, fire protection may be required in the case of accident conditions, but these would be short-term demands and would not require increases in the level of service offered or affect these agencies' response times. Because of the low probability and short-term nature of potential fire protection needs during construction, the proposed project would result in less-than-significant impacts.

b) Police protection?

Less than Significant Impact. The proposed roadway improvements would not result in an increase in demand for police protection services beyond existing conditions, and therefore, would not have operational impacts to police protection or cause a need for new or altered police protection facilities. A police protection need could occur during project construction if theft or crime associated with the construction equipment or construction site would occur; however, these types of events would not trigger an increase above provided police protection levels. Therefore, the project would result in less-than-significant impacts.

c) Schools?

No Impact. The proposed project would place no demand on school services because it would not involve the construction of facilities that would generate school-aged children and would not involve the introduction of a temporary or permanent population into this area. Therefore, the project would have no impact on schools.

d) Parks?

No Impact. The proposed project would place no demand on parks because it would not involve the introduction of a temporary or permanent population into the area that would use parks. Therefore, the project would have no impact on parks.

e) Other public facilities?

No Impact. The proposed project would not involve the introduction of a temporary or permanent human population into this area. Therefore, the project would have no impact on other public facilities.

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed roadway improvements would not generate a population that would increase demand for parks or recreational facilities. Therefore, the proposed project would not affect use of existing facilities. No impacts to recreation would occur.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed roadway improvements would not generate a population that would increase demand for parks or recreational facilities, and the project would not include recreational facilities. Therefore, the proposed project would not require the construction or expansion of existing recreational facilities that would have an adverse physical effect on the environment. No impacts to recreation would occur.

XVII. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant with Mitigation Incorporated. A Transportation Impact Analysis (TIA) was prepared for the project (LLG 2020) to describe the existing roadway and intersection functions under current conditions and to analyze future roadway and intersection functions following implementation of the proposed project, which involves improving Murrieta Hot Springs Road from four lanes to six lanes between Margarita Road and Winchester Road. The study is summarized below, and the complete TIA is included as Appendix H of this Initial Study.

Roadway segment and intersection operating conditions are typically described in terms of level of service (LOS). LOS is a scale used to indicate the quality of traffic flow on roadway segments and at intersections, with a range from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). The City General Plan 2035 Circulation Element (City 2011b) identifies LOS C as the acceptable LOS for roadway segment operations and LOS D as the acceptable LOS for peak hour intersection operations.

Existing Plus Project Scenario

Intersections

Intersection operations under the Existing and Existing With Project conditions are shown in Table 7, *Existing Intersection Operations*. As shown in the table, three intersections operate at an unacceptable LOS (LOS E or F) under Existing conditions:

- Murrieta Hot Springs Road/Calle Del Lago intersection;
- Murrieta Hot Springs Road/Delhaven Street intersection; and
- Murrieta Hot Springs Road/Highway 79 intersection.

Under the Existing With Project scenario, one intersection, the Murrieta Hot Springs Road/Delhaven Street intersection, would operate at an unacceptable LOS. Although the Murrieta Hot Springs Road/Delhaven Street intersection would continue to operate at an unacceptable LOS with the project, the project would reduce delay at this intersection during both the AM and PM peak hours. In addition, the project would improve the Murrieta Hot Springs Road/Highway 79 and Murrieta Hot Springs Road/Calle Del Lago intersections to an acceptable LOS. Therefore, no adverse impacts to intersections would occur under the Existing With Project scenario.

Table 7
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing With Project		Δ Delay ³
			Delay ¹	LOS ²	Delay	LOS	
Murrieta Hot Springs Road/Margarita Road	Signal	AM	27.4	C	27.3	C	-0.1
		PM	38.8	D	39.8	D	1.0
Murrieta Hot Springs Road/Via Princesa	Signal	AM	15.3	B	14.1	B	-1.2
		PM	16.1	B	14.3	B	-1.8
Murrieta Hot Springs Road/Calle Del Lago	MSSC	AM	26.7	D	17.7	C	-9.0
		PM	43.3	E	21.9	C	-21.4
Murrieta Hot Springs Road/Date Street	DNE	AM	DNE	DNE	DNE	DNE	N/A
		PM	DNE	DNE	DNE	DNE	N/A
Murrieta Hot Springs Road/Delhaven Street (SBR)	MSSC ⁴	AM	98.2	F	49.2	E	-49.0
		PM	345.9	F	130.1	F	-215.8
Murrieta Hot Springs Road/Delhaven Street (WBL)	MSSC	AM	10.8	B	15.7	C	4.9
		PM	13.1	B	21.3	C	8.2
Murrieta Hot Springs Road/Delhaven Street	TWSC	AM	98.2	F	49.2	E	-49.0
		PM	503.9	F	172.0	F	-331.9
Murrieta Hot Springs Road/Highway 79	Signal	AM	40.7	D	36.3	D	-4.4
		PM	56.8	E	47.1	D	-9.7

Source: LLG 2020

¹ Average delay expressed in seconds per vehicle.

² Level of Service.

³ Change in delay due to project.

⁴ Only right turns are permitted from the Minor street at this intersection, major street left-turn delay and LOS are reported.

DNE = does not exist; N/A = not applicable; MSSC = minor street stop controlled; SBR = southbound right-turn;

WBL = westbound left-turn; TWSC = two way stop controlled

Roadway Segments

Roadway segment operations under the Existing and Existing With Project conditions are shown in Table 8, *Existing Roadway Segment Operations*. As shown in Table 8, five roadway segments operate at an unacceptable LOS (LOS D or worse) under Existing conditions:

- Murrieta Hot Springs Road from School House Way to Via Princesa West;
- Murrieta Hot Springs Road from Margarita Road to Via Princesa East;
- Murrieta Hot Springs Road from Via Princesa East to Calle Del Lago;
- Murrieta Hot Springs Road from Calle Del Lago to Delhaven Street; and
- Murrieta Hot Springs Road from Delhaven Street to Highway 79.

Under the Existing With Project scenario, one roadway segment, Murrieta Hot Springs Road from School House Way to Via Princesa West, would operate at an unacceptable LOS. The project would result in no change to the volume-to-capacity ratio of the Murrieta Hot Springs Road from School House Way to Via Princesa West roadway segment. In addition, the project would improve the four other roadway segments described above to an acceptable LOS. Therefore, no adverse impacts to roadway segments would occur under the Existing With Project scenario.

Table 8
EXISTING ROADWAY SEGMENT OPERATIONS

Roadway Segment	Existing				Existing With Project				Δ V/C ⁵
	LOS C Capacity ¹	ADT ²	LOS ³	V/C ⁴	LOS C Capacity	ADT	LOS	V/C	
Murrieta Hot Springs Road									
School House Way to Via Princesa West	43,100	51,970	E	1.206	43,100	51,970	E	1.206	0.000
Margarita Road to Via Princesa East	28,700	38,450	F	1.340	43,100	38,450	C	0.892	-0.448
Via Princesa East to Calle Del Lago	28,700	34,680	E	1.208	43,100	34,680	B	0.805	-0.403
Calle Del Lago to Delhaven Street	28,700	35,680	E	1.243	43,100	35,680	B	0.828	-0.415
Delhaven Street to Highway 79	28,700	34,170	E	1.191	43,100	34,170	B	0.793	-0.398
Margarita Road									
Murrieta Hot Springs Road to Torrey Pines Road	27,300	21,870	B	0.801	27,300	21,870	B	0.801	0.000

Source: LLG 2020

¹ Capacities based on City of Murrieta Roadway Classification Table.

² Average Daily Traffic.

³ Level of Service.

⁴ Volume to Capacity.

⁵ Change in V/C due to project.

Opening Year 2020 Scenario

To determine intersection and roadway segment operations under the Opening Year 2020 scenario, the TIA identified six planned (cumulative) projects in the vicinity of the proposed project and their associated traffic contributions (see Appendix H for descriptions of the projects and the estimated number of trips generated by each). The traffic generated by the six cumulative projects was assigned to the study area intersections and was added to the Existing traffic volumes with 2 percent ambient growth, to obtain the Opening Year 2020 traffic volumes.

Intersections

Intersection operations under the Opening Year 2020 scenario are shown in Table 9, *Opening Year 2020 Intersection Operations*. As shown in the table, three intersections would operate at an unacceptable LOS (LOS E or F) under the Opening Year 2020 scenario without the project:

- Murrieta Hot Springs Road/Calle Del Lago intersection;
- Murrieta Hot Springs Road/Date Street intersection; and

- Murrieta Hot Springs Road/Highway 79 intersection.

Under the Opening Year 2020 With Project scenario, two intersections would operate at an unacceptable LOS:

- Murrieta Hot Springs Road/Delhaven Street intersection; and
- Murrieta Hot Springs Road/Highway 79 intersection.

Although these two intersections would continue to operate at an unacceptable LOS with the project, the project would reduce delay at the Murrieta Hot Springs Road/Highway 79 intersection during both the AM and PM peak hours. The delays at the Murrieta Hot Springs Road/Delhaven Street increases with the improvement because left-turns are not permitted from Delhaven Street, the minor street, from this intersection; therefore, the delay and LOS reported is for the left-turn movement onto Murrieta Hot Springs Road, the main street. Hence, since the left-turning traffic has to cross three through lanes (one additional lane) due to the improvement, the delay is higher. Therefore, no adverse impacts to intersections would occur under the Opening Year 2020 scenario.

Table 9
OPENING YEAR 2020 INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Opening Year 2020		Opening Year 2020 With Project		Δ Delay ³
			Delay ¹	LOS ²	Delay	LOS	
Murrieta Hot Springs Road/Margarita Road	Signal	AM	30.1	C	33.1	C	3.0
		PM	47.0	D	47.9	D	0.9
Murrieta Hot Springs Road/Via Princesa	Signal	AM	15.3	B	13.7	B	-1.6
		PM	17.1	B	14.2	B	-2.9
Murrieta Hot Springs Road/Calle Del Lago	MSSC	AM	97.8	F	-	-	N/A
		PM	1,133.6	F	-	-	N/A
	Signal	AM	-	-	16.3	B	-81.5
		PM	-	-	16.5	B	-1,117.1
Murrieta Hot Springs Road/Date Street	Signal	AM	48.1	D	24.9	C	-23.2
		PM	70.1	E	33.8	C	-36.3
Murrieta Hot Springs Road/Delhaven Street (SBR)	MSSC ⁴	AM	15.0	C	17.1	C	2.1
		PM	17.7	C	20.4	C	2.7
Murrieta Hot Springs Road/Delhaven Street (WBL)	MSSC	AM	12.2	B	19.6	C	7.4
		PM	16.6	C	36.8	E	20.2
Murrieta Hot Springs Road/Highway 79	Signal	AM	53.6	D	44.4	D	-9.2
		PM	80.1	F	60.6	E	-19.5

Source: LLG 2020

¹ Average delay expressed in seconds per vehicle.

² Level of Service.

³ Change in delay due to project.

⁴ Only right turns are permitted from the Minor street at this intersection, major street left-turn delay and LOS are reported.

N/A = not applicable; MSSC = minor street stop controlled; SBR = southbound right-turn; WBL = westbound left-turn

Roadway Segments

Roadway segment operations under the Opening Year 2020 scenario are shown in Table 10, *Opening Year 2020 Roadway Segment Operations*. As shown in Table 10, five roadway segments would operate at an LOS F under the Opening Year 2020 scenario without the project:

- Murrieta Hot Springs Road from School House Way to Via Princesa West;
- Murrieta Hot Springs Road from Margarita Road to Via Princesa East;
- Murrieta Hot Springs Road from Via Princesa East to Calle Del Lago;
- Murrieta Hot Springs Road from Calle Del Lago to Delhaven Street; and
- Murrieta Hot Springs Road from Delhaven Street to Highway 79.

Under the Opening Year 2020 With Project scenario, one roadway segment, Murrieta Hot Springs Road from School House Way to Via Princesa West, would operate at an LOS F. The project would result in no change to the volume-to-capacity ratio of the Murrieta Hot Springs Road from School House Way to Via Princesa West roadway segment. Therefore, no adverse impacts to roadway segments would occur under the Opening Year 2020 scenario.

Table 10
OPENING YEAR 2020 ROADWAY SEGMENT OPERATIONS

Roadway Segment	Opening Year 2020				Opening Year 2020 With Project				Δ V/C ⁵
	LOS C Capacity ¹	ADT ²	LOS ³	V/C ⁴	LOS C Capacity	ADT	LOS	V/C	
Murrieta Hot Springs Road									
School House Way to Via Princesa West	43,100	56,590	F	1.313	43,100	56,590	F	1.313	0.000
Margarita Road to Via Princesa East	28,700	43,350	F	1.510	43,100	43,350	D	1.006	-0.504
Via Princesa East to Calle Del Lago	28,700	40,300	F	1.404	43,100	40,300	C	0.935	-0.469
Calle Del Lago to Delhaven Street	28,700	40,690	F	1.418	43,100	40,690	C	0.944	-0.474
Delhaven Street to Highway 79	28,700	41,320	F	1.440	43,100	41,320	C	0.959	-0.481
Margarita Road									
Murrieta Hot Springs Road to Torrey Pines Road	27,300	23,090	B	0.846	27,300	23,090	B	0.846	0.000

Source: LLG 2020

¹ Capacities based on City of Murrieta Roadway Classification Table.

² Average Daily Traffic.

³ Level of Service.

⁴ Volume to Capacity.

⁵ Change in V/C due to project.

Long-Term Year 2035 Scenario

To determine intersection and roadway segment operations under the Long-Term Year 2035 scenario, the TIA obtained baseline Year 2035 intersection and segment volumes from the City General Plan 2035 (City 2011b).

Intersections

Intersection operations under the Long-Term Year 2035 scenario are shown in Table 11, *Long-Term Year 2035 Intersection Operations*. As shown in the table, five intersections would operate at an unacceptable LOS (LOS E or F) under the Long-Term Year 2035 scenario without the project:

- Murrieta Hot Springs Road/Margarita Road intersection;
- Murrieta Hot Springs Road/Calle Del Lago intersection;
- Murrieta Hot Springs Road/Date Street intersection;
- Murrieta Hot Springs Road/Delhaven Street intersection; and
- Murrieta Hot Springs Road/Highway 79 intersection.

Under the Long-Term Year 2035 With Project scenario, four out of five intersections would continue to operate at an unacceptable LOS. Although the Murrieta Hot Springs Road/Margarita Road intersection would continue to operate at an unacceptable LOS during the PM peak hour, the project would reduce delay at this intersection during the PM peak hour (under both long-term scenarios, the intersection operates at an acceptable LOS during the AM peak hour). Similarly, the Murrieta Hot Springs Road/Highway 79 intersection would continue to operate at an unacceptable LOS with the project, but the project would reduce delay at this intersection during both the AM and PM peak hours. Therefore, no impacts would occur to the Murrieta Hot Springs Road/Margarita Road or Murrieta Hot Springs Road/Highway 79 intersections under the Long-Term Year 2035 With Project scenario.

With the project, the delays at the Murrieta Hot Springs Road/Delhaven Street increases with the improvement. Left turns are not permitted from Delhaven Street, the minor street, at this intersection. Therefore, the delay and LOS reported is for the left-turn movement on the main street, Murrieta Hot Springs Road. Hence, since the left-turning traffic has to cross three through lanes (one additional lane) due to the improvements, the delay is higher.

Because the Murrieta Hot Springs Road/Calle Del Lago, Murrieta Hot Springs Road/Date Street, and Murrieta Hot Springs Road/Delhaven Street intersections are unsignalized, cross traffic from Calle Del Lago, Date Street, and Delhaven Street would not be able to easily negotiate a left turn on to the proposed project's 6-Lane Murrieta Hot Springs Road. Therefore, impacts would be potentially significant. Implementation of mitigation measures TRA-1 through TRA-3, which involve installing traffic signals at the Murrieta Hot Springs Road/Calle Del Lago and Murrieta Hot Springs Road/Date Street intersections and restricting access to right-in/right-out only with a raised median at the Murrieta Hot Springs Road/Delhaven Street intersection. This would allow for acceptable LOS at all three intersections (signal delay is shown in Table 11) and would reduce impacts to a less-than-significant level.

Table 11
LONG-TERM YEAR 2035 INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Long-Term Year 2035		Long-Term Year 2035 With Project		Δ Delay ³
			Delay ¹	LOS ²	Delay	LOS	
Murrieta Hot Springs Road/ Margarita Road	Signal	AM	40.0	D	41.5	D	1.5
		PM	118.5	F	111.4	F	-7.1
Murrieta Hot Springs Road/ Via Princesa	Signal	AM	23.0	C	15.4	B	-7.4
		PM	41.0	D	26.9	C	-13.9
Murrieta Hot Springs Road/ Calle Del Lago	MSSC	AM	>500.0	F	--	--	N/A
		PM	32.1	D	--	--	N/A
	Signal	AM	--	--	7.8	A	--
		PM	--	--	8.2	A	--
Murrieta Hot Springs Road/ Date Street	DNE	AM	160.7	F	30.7	C	-130.0
		PM	193.2	F	32.2	C	-161.0
Murrieta Hot Springs Road/ Delhaven Street	MSSC	AM	57.7	F	73.9	F	16.2
		PM	355.4	F	484.4	F	129.0
	Signal	AM	--	--	8.9	A	--
		PM	--	--	15.9	B	--
Murrieta Hot Springs Road/ Highway 79	Signal	AM	233.2	F	139.7	F	-93.5
		PM	269.0	F	180.2	F	-88.8

Source: LLG 2020

¹ Average delay expressed in seconds per vehicle.² Level of Service.³ Change in delay due to project.

DNE = does not exist; N/A = not applicable; MSSC = minor street stop controlled

Roadway Segments

Roadway segment operations under the Long-Term Year 2035 scenario are shown in Table 12, *Long-Term Year 2035 Roadway Segment Operations*. As shown in Table 12, five roadway segments would operate at an unacceptable LOS (LOS D or worse) under the Long-Term Year 2035 Without Project scenario:

- Murrieta Hot Springs Road from School House Way to Via Princesa West;
- Murrieta Hot Springs Road from Margarita Road to Via Princesa East;
- Murrieta Hot Springs Road from Via Princesa East to Calle Del Lago;
- Murrieta Hot Springs Road from Calle Del Lago to Delhaven Street; and
- Murrieta Hot Springs Road from Delhaven Street to Highway 79.

Under the Year 2035 With Project scenario, the same five roadway segments would operate at an unacceptable LOS. Although these five roadway segments would continue to operate at an unacceptable LOS, the project would result in either no change or a decrease to their volume-to-capacity ratios. Therefore, no impacts to roadway segments would occur under the Long-Term Year 2035 scenario.

Table 12
LONG-TERM YEAR 2035 ROADWAY SEGMENT OPERATIONS

Roadway Segment	Long-Term Year 2035 Without Project				Long-Term Year 2035 With Project				Δ V/C ⁵
	LOS C Capacity ¹	ADT ²	LOS ³	V/C ⁴	LOS C Capacity	ADT	LOS	V/C	
Murrieta Hot Springs Road									
School House Way to Via Princesa West	43,100	66,400	F	1.541	43,100	66,400	F	1.541	0.000
Margarita Road to Via Princesa East	28,700	56,800	F	1.979	43,100	56,800	F	1.318	-0.661
Via Princesa East to Calle Del Lago	28,700	52,600	F	1.833	43,100	52,600	F	1.220	-0.613
Calle Del Lago to Delhaven Street	28,700	54,200	F	1.889	43,100	54,200	F	1.258	-0.631
Delhaven Street to Highway 79	28,700	66,500	F	2.317	43,100	66,500	F	1.543	-0.774
Margarita Road									
Murrieta Hot Springs Road to Torrey Pines Road	27,300	23,200	B	0.850	27,300	23,200	B	0.850	0.000

Source: LLG 2020

¹ Capacities based on City of Murrieta Roadway Classification Table.

² Average Daily Traffic.

³ Level of Service.

⁴ Volume to Capacity.

⁵ Change in V/C due to project.

Overall, the widening of Murrieta Hot Springs Road would result in improved traffic operations in both the near-term and long-term timeframes. Although a number of roadway segments would continue to operate at an unacceptable LOS, the volume-to-capacity ratios of these roadways would be improved, allowing for a more efficient and effective circulation system. With implementation of mitigation measures TRA-1 through TRA-3, intersection operations would be improved as well.

Mitigation Measures

TRA-1 The City shall install a signalized intersection at the Murrieta Hot Springs Road/Calle Del Lago intersection. The intersection shall include one shared left-through-right lane in both the southbound and northbound directions.

TRA-2 The City shall restrict access to right-in/right-out only with a raised median at Delhaven.

TRA-3 The City shall install a signalized intersection at the Murrieta Hot Springs Road/Date Street intersection. The intersection shall include one left-right lane and two right-turn lanes in the northbound direction.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?

Less than Significant Impact. The analysis of vehicle miles traveled in CEQA Guidelines section 15064.3 provides that transportation impacts of projects are, in general, best measured by evaluating the project's vehicle miles traveled. Vehicle miles traveled reflects both the number and the distance of the

trips taken. Construction activities would require the delivery of construction equipment and materials to the project site, in addition to the removal of construction waste from the site; however, such trips would be both brief and infrequent. Operation of the proposed project would not cause an increase in vehicle miles traveled above existing conditions. Therefore, implementation of the proposed project would not substantially increase vehicle miles traveled during construction or operation. As such, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3. Impacts would be less than significant.

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

Less than Significant Impact. During construction, a Traffic Control Plan would be implemented to maintain safe roadway conditions for travelers along Murrieta Hot Springs Road. Upon completion of construction, the proposed curbed median, lighting poles, bike lanes, sidewalks, and crosswalks would minimize hazards to vehicular travelers, bicyclists, and pedestrians. Therefore, impacts would be less than significant.

- d) Result in inadequate emergency access?

Less than Significant Impact. During construction, certain lanes and/or parts of the roadway may be closed to vehicular traffic; however, a Traffic Control Plan would be implemented and would maintain adequate access to areas along Murrieta Hot Springs Road. Upon completion of construction, the improved roadway would include more lanes and would therefore allow for improved access to the surrounding areas. As such, impacts would be less than significant.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
- ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant with Mitigation Incorporated. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources, as defined in subdivision (k) of Public Resources Code Section 5020.1, or determined to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1. As discussed in response V.b, cultural resources (including tribal cultural resources) may be present within the project alignment based on the presence of young alluvial deposits, the NAHC's indication of the area's cultural sensitivity, and tribal importance of the project area. According to the Pechanga Band of Luiseño Indians, the Project area and the surrounding vicinity are situated within a culturally sensitive area. There is a complex of related sites and features having cultural value and meeting the definition of TCR. The Project area consists of place names, villages, and sacred areas that comprise a Traditional Cultural Property (TCP) which is listed on the Native American Heritage Commission's Sacred Lands File. Traditional tribal knowledge always holds a reference and relation to material components and elements of the Ancestral territory. The Tribe, through tribal consultation, provided information showing the cultural significance of the Project area.

A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Cal Pub Res C 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource (Cal Pub Res C 21084.3(a)). Because avoidance and preservation in place are preferences for treatment

of TCRs, the Tribe prefers that unanticipated finds be preserved in a dedicated open space area that will protect the resources so as to not materially impair the physical resources.

Grading and other ground-disturbing activities would therefore have the potential to cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be potentially significant. Therefore, the project would implement an archaeological and Native American monitoring program, as detailed in mitigation measures CUL-1 through CUL-7, which would reduce potentially significant impacts to tribal cultural resources to a less-than-significant level.

Mitigation Measures

- CUL-1** At least 30 days prior to the start any ground-disturbing activities, the City shall contact the Consulting Tribe to develop a Cultural Resources Treatment and Monitoring Agreement (“Agreement”). The Agreement shall address the treatment and final disposition of any tribal cultural resources, sacred sites, human remains, or archaeological resources inadvertently discovered on the project site; project grading, ground disturbance, and development scheduling; the designation, responsibilities, and participation of tribal monitor(s) during grading, excavation, and ground disturbing activities; and compensation for the tribal monitors, including overtime, weekend rates, and mileage reimbursements. The Tribal Monitor shall have the authority to temporarily divert, redirect or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist.
- CUL-2** A qualified archaeologist and tribal monitor shall attend a pre-construction meeting with City staff, the contractor, and appropriate subcontractors to discuss the monitoring program, including protocols to be followed in the event that cultural material is encountered.
- CUL-3** A qualified archaeological monitor and a tribal monitor shall be present for ground-disturbing activities. At least seven business days prior to project grading, the City shall contact the Consulting Tribe and archaeologist to notify them of grading/excavation and the schedule, and to coordinate with the Tribe and archaeologist on the work schedule. Both the archaeologist and the tribal monitor shall have the authority to stop and redirect grading activities in order to evaluate the nature and significance of any archaeological resources discovered within the Area of Potential Effect (APE).
- CUL-4** If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Consulting Tribe.
- i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the contractor, the archaeologist, the tribal representative(s) and the City to discuss the significance of the find.

- ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representative(s) and the archaeologist, a decision shall be made, with the concurrence of the City, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.
- iii. Grading or further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal monitors if needed.
- iv. Treatment and avoidance of the newly discovered resources shall be consistent with the mitigation measures for the project. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition.
- v. If the find is determined to be significant and avoidance of the site cannot be achieved, a Phase III data recovery plan shall be prepared by the project archaeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.
- vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the appropriate mitigation for the archaeological or cultural resources, these issues will be presented to the City Planning Director for decision. The City Planning Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archaeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City shall be appealable to the Planning Commission and/or City Council.

CUL-5

Disposition of Cultural Resources: In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

- a) One or more of the following treatments, in order of preference, shall be employed with the tribes.
 - i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.
 - ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been

completed, with an exception that sacred items, burial goods and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

- iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report.

CUL-6 The City shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts that are found within the project area, for proper treatment and disposition pursuant to the Agreement required in mitigation measure CUL-1 and CUL-5.

CUL-7 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to 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. If the Riverside County Coroner determines the remains to be Native American, the NAHC must be contacted within 24 hours. The NAHC must then immediately identify the most likely descendant(s) for purposes of receiving notification of discovery. The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The proposed project would not generate wastewater, require wastewater service, or result in the construction or expansion of wastewater treatment facilities. The project would use a minimal amount of water required for dust control during the temporary construction period and landscaping during project operation; the project would not require a substantial water supply that would require or result in the construction of new water treatment facilities or expansion of existing facilities. The proposed project would include the construction of gutters, catch basins, and storm drains within the project alignment. The impacts of these on-site facilities are analyzed in this Initial Study as part of the project. Although the project would require the relocation of some electric power and telecommunications facilities along the alignment, these relocations would occur within the limits of the expanded right-of-way and would represent in-kind replacement with not expansion in capacity, which would be carried out in the course of the overall project construction effort. Additionally, the project would not require the construction or expansion of off-site drainage facilities. Impacts would be less than significant.

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. The project would use a minimal amount of water required for dust control during the temporary construction period and landscaping during project operation. The project would not require a substantial water supply, and sufficient water supplies would be available to serve the project in the reasonably foreseeable future during normal, dry and multiple dry years. Therefore, impacts would be less than significant.

- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The proposed project would not require wastewater service. Therefore, the project would not exceed the wastewater capacity of the local wastewater treatment provider. No impact would occur.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact. The proposed roadway improvements would generate a minimal amount of construction waste and no ongoing operational waste. Based on the small quantity of material, the proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, no impacts would occur.

- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The proposed roadway improvements would generate a minimal amount of construction waste and no ongoing operational waste. Solid waste produced by the proposed project would be disposed of at a properly permitted facility in accordance with federal, state, and local laws. Therefore, no impacts would occur.

XX. WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. According to the Very High Fire Hazard Severity Zones in LRA map prepared by CAL FIRE for the City of Murrieta, the project site is not located within a VHFHSZ (CAL FIRE 2009). Additionally, as stated above in item IX.f, certain lanes and/or parts of the roadway may be closed to vehicular traffic during construction; however, a Traffic Control Plan would be implemented to identify traffic control measures through the duration of project construction activities. The Traffic Control Plan would maintain adequate access and the project would therefore not substantially impair an emergency response plan or emergency evacuation plan. Furthermore, upon completion of construction, the improved roadway would include more lanes and would therefore allow for improved access to the surrounding areas. As such, impacts would be less than significant.

- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less than Significant Impact. As stated above in item XX.a, the project site is not located within a VHFHSZ so the site is not considered to be at a great risk for wildfires (CAL FIRE 2009). Additionally, construction BMPs, including maintaining existing slope stabilization measures and stabilizing all slopes greater than three feet in height, would be implemented, ensuring that the project would not exacerbate wildfire risks. As such, the project would not expose occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire by exacerbating wildfire risks due to slope, prevailing winds, and other factors. Impacts would be less than significant.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant Impact. As stated above in item XX.a, the project site is not located within a VHFHSZ so the site is not considered to be at a great risk for wildfires (CAL FIRE 2009). The project involves roadway improvements in addition to the relocation of power poles, dry utilities, and fire hydrants along the alignment. However, implementation of the project would not exacerbate fire risk. The project involves improvements to existing infrastructure, which would not cause significant impacts on wildfire risk. As such, impacts are less than significant. The potential impacts to the environment involved with the maintenance of infrastructure such as roadways and other utilities is analyzed throughout this IS/MND.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less than Significant Impact. As stated in item XX.a above, the project site is not located within a VHFHSZ so the site is not considered to be at a great risk for wildfires (CAL FIRE 2009). Additionally, the project would include construction BMPs which would minimize impacts related to downslope or downstream flooding or landslides, including maintaining existing slope stabilization measures, stabilizing all slopes greater than three feet in height, and providing inlet protection, gravel bags, and silt fences where applicable. As such, impacts would be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number, or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation Incorporated. Although no burrowing owls or burrowing owl signs were observed on the project alignment or potential off-site staging areas, the project alignment does contain on-site burrows with potential to support burrowing owl. The project alignment also contains vegetation that may provide nesting habitat for migratory birds, which are protected under the MBTA and could be affected if construction occurs during the breeding season. Mitigation measures BIO-1 and BIO-2 would reduce potential impacts to burrowing owl and migratory birds to a less-than-significant level. The project would also implement mitigation measure BIO-3 to ensure consistency with the Western Riverside MSHCP. Therefore, impacts to biological resources would be less than significant. Although cultural and tribal cultural resources were not identified within the project alignment, the potential for such resources exists due to the sensitivity of the area. Therefore, the project would implement mitigation measures CUL-1 through CUL-5 to reduce potential impacts to a less-than-significant level.

- b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects)?

Less than Significant with Mitigation Incorporated. The City General Plan 2035 EIR (City 2011a) considered cumulative impacts associated with increased development in the City and region. The EIR identified potentially significant cumulative impacts in the following areas: aesthetics; traffic and circulation; air quality; noise; geology and seismic hazards; cultural resources; hydrology, drainage, and water quality; hazards and hazardous materials; wastewater; school facilities; and parks and recreational facilities. The project’s potentially cumulatively considerable impact to these areas are discussed below.

Aesthetics. Potentially significant cumulative impacts to aesthetics were identified in the City General Plan 2035 EIR from construction. The measures identified in the EIR, AES-1 through AES-3, have been incorporated into this IS/MND to reduce the project’s impacts to less than significant. Therefore, the project would not contribute a cumulatively considerable impact to aesthetics.

Traffic and Circulation. Potentially significant cumulative impacts were identified in the City General Plan 2035 EIR from roadways and intersections operating at an unacceptable LOS due to growth projections in the general plan, including Murrieta Hot Springs Road. Implementation of the proposed project and associated mitigation measures TRA-1 through TRA-3 would assist in reducing congestion on Murrieta Hot Springs Road, which would reduce the overall cumulative impact. Therefore, the project would not contribute a cumulatively considerable impact to traffic and circulation.

Air Quality. Potentially significant cumulative impacts were identified in the City General Plan 2035 EIR from regional air quality emissions resulting from buildout of the proposed General Plan, including from construction and operation of the buildout projects. The EIR determined that these impacts were significant and unavoidable. As discussed in Section III, the project would be consistent with the local AQMP, and criteria pollutant emissions from the project would not exceed SCAQMD thresholds. Therefore, the project would not contribute a cumulatively considerable impact to air quality.

Noise. Potentially significant cumulative noise impacts were identified in the City General Plan 2035 EIR from short-term activities (pile driving during construction or vibration within 50 feet of a historical structure) and long-term activities (traffic). As discussed in Section XII, the project’s construction and operational noise would not exceed City Noise Ordinance and Land Use Compatibility noise standards. In addition, project construction would not involve pile driving or vibration generation within 50 feet of a historical structure (all piles would be drilled and cast in place, not driven). Therefore, the project would not contribute a cumulatively considerable impact to noise.

Geology and Seismic Hazards. Potentially significant cumulative geology impacts were identified in the City General Plan 2035 EIR related to seismic, geologic, and soil conditions from development. The project would implement mitigation measure GEO-1, a geological investigation, to mitigate the project’s geology and seismic hazards impacts to less than significant. Additionally, as paleontological resources impacts are necessarily site-specific, implementation of mitigation measures PAL-1 and PAL-2 would adequately address cumulative effects on fossil resources in the region. Therefore, with implementation of this measure the project would not contribute a cumulatively considerable impact to geology and seismic hazards and paleontological resources.

Cultural Resources. Potentially significant cumulative cultural and paleontological impacts were identified in the City General Plan 2035 EIR from construction in the City that could have a cumulatively adverse effect on these resources. The project's potentially significant impacts to archaeological resources and Tribal Cultural Resources would be mitigated through CUL-1 through CUL-6. With mitigation, the project would not contribute a cumulatively considerable impact to archaeological resources and Tribal Cultural Resources.

Hydrology, Drainage, and Water Quality. Potentially significant cumulative hydrology and water quality impacts were identified in the City General Plan 2035 EIR from construction and operation of projects in the City. The project would implement a SWPPP in accordance with NPDES standards to result in less than significant construction impacts, and the project would prepare and implement a WQMP to result in less than significant operational impacts. Therefore, the project would not contribute a cumulatively considerable impact to hydrology and water quality.

Hazards and Hazardous Materials. Potentially significant cumulative hazards impacts were identified in the City General Plan 2035 EIR that would be mitigated through measures related to businesses and households through education, Risk Management and Prevention Plans for businesses that handle hazardous wastes, and notification to the Federal Aviation Administration if a tall structure is proposed. As the proposed project is a roadway project that does not contain a residential or commercial component or a tall structure, the cumulative hazardous material impacts identified in the City General Plan 2035 EIR would not be applicable to the proposed project.

Wastewater. Potentially significant cumulative impacts were identified in the City General Plan 2035 EIR from wastewater generation due to continued development in the City, to be mitigated through building permits. As the proposed project would not implement wastewater systems or generate additional wastewater, the project would not contribute to this cumulative impact.

School Facilities. Potentially significant cumulative impacts were identified in the City General Plan 2035 EIR to school facilities from continued population growth in the area. As the project is a roadway widening and improvements project that would accommodate planned growth, and not induce growth, the project would not contribute to this cumulative impact.

Parks and Recreational Facilities. Potentially significant cumulative impacts were identified in the City General Plan 2035 EIR to parks and recreational facilities from continued population growth in the area. As the project is a roadway widening and improvements project that would accommodate growth, and not induce growth, the project would not contribute to this cumulative impact.

As described above, with mitigation the proposed project would not result in a cumulatively considerable increase to cumulative impacts within the City. Therefore, impacts would be less than significant with mitigation.

- c) Have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact with Mitigation Incorporated. Exposure to environmental effects associated with geology and soils (e.g., seismic shaking and liquefaction) may result in substantial adverse effects to humans. Implementation of mitigation measure GEO-1 would ensure adherence to regulatory codes, ordinances, regulations, standards, and guidelines for geology and soils. Therefore, impacts from construction and operation of the proposed project to human beings would be less than significant with mitigation.

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