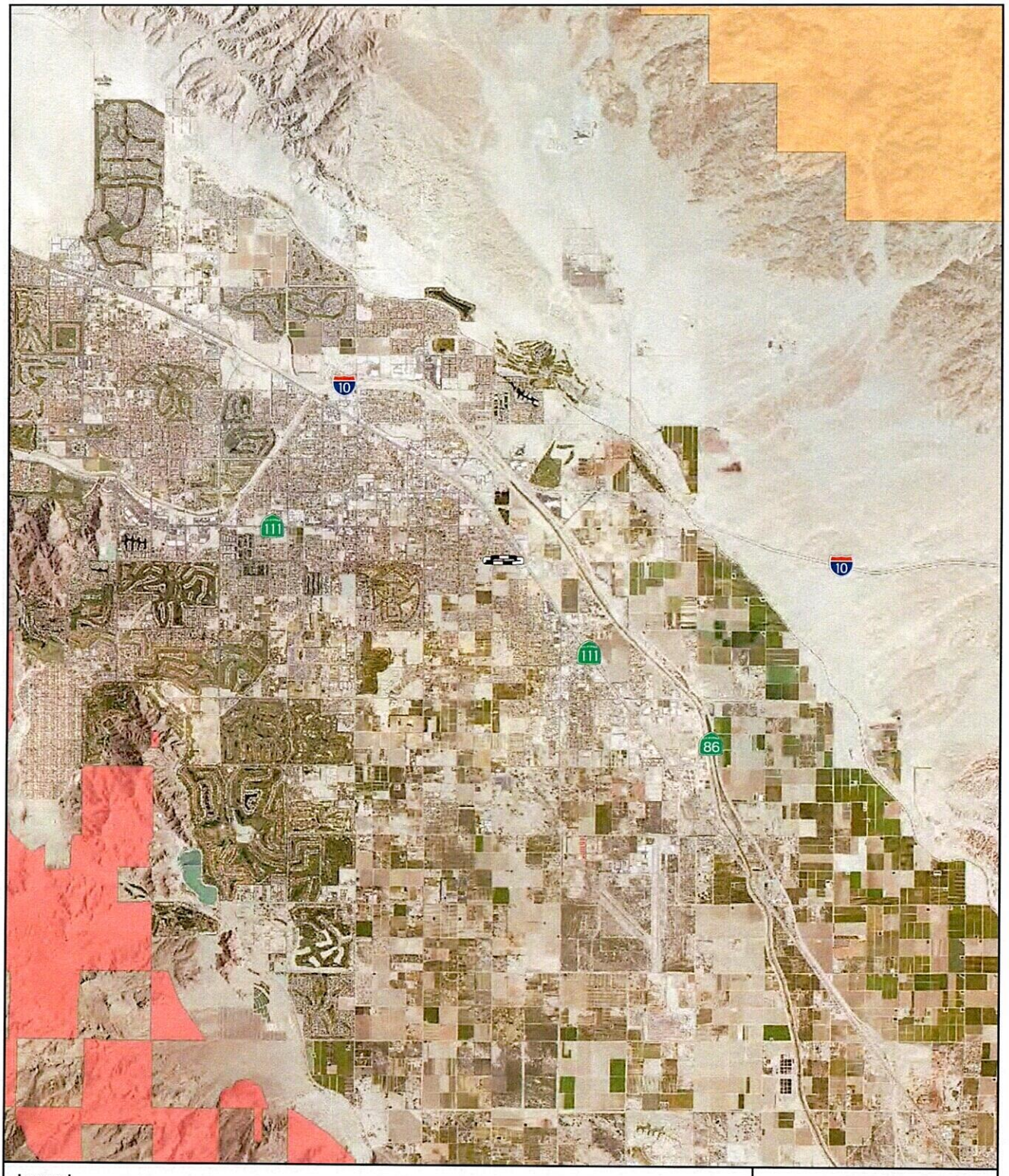
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact. The proposed project is located within the boundaries of the CVMSHCP Area, but is not located within any Conservation Areas, Preserves, Cores, or Linkages. The proposed project is listed as a "Covered Activity" under the CVMSHCP, and therefore is consistent with the biological goals and objectives of the CVMSHCP. Therefore, potential impacts are considered less than significant and no mitigation is required.



Legend

- Survey Area
- Desert Tortoise (*Gopherus agassizii*)
- Peninsular bighorn sheep (*Ovis canadensis nelsoni*)

0 1 2
Miles

FIGURE 3-6

CRITICAL HABITAT

COUNTY OF RIVERSIDE

AVENUE 48
WIDENING PROJECT

Source: Michael Baker International, 2018

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3.4.3 Mitigation Measures

BIO-1 In order to comply with the MBTA, and relevant sections of the California Fish and Game Code (e.g., Sections 3503, 3503.3, 3511, 3513), if construction occurs between February 1st and August 31st, within three days of the start of any vegetation removal or ground disturbing activities a qualified biologist shall conduct a pre-construction clearance survey for nesting birds to ensure that no nesting birds would be disturbed during construction. The qualified biologist conducting the clearance survey shall document a negative survey with a brief letter report indicating that no impacts to active avian nests or burrows would occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For listed and raptor species, this buffer should be expanded to 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and monitor the active nest to ensure that nesting behavior is not adversely affected by construction activities as determined by the biologist. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

BIO-2 A pre-construction burrowing owl clearance survey shall be conducted to confirm that burrowing owls remain absent and impacts to any occupied burrows that may be located on or within 500 feet of the development footprint do not occur. Two pre-construction clearance surveys shall be conducted 14 to 30 days and 24 hours prior to any vegetation removal or ground-disturbing activities.

BIO-3 Best Management Practices (BMPs) will be incorporated into project design and project management to minimize impacts on the environment including the release of pollutants (oils, fuels, etc.). All Temporary BMPs will remain in place until vegetation has been restored to pre-project conditions:

- The area of construction and disturbance would be limited to as small an area as feasible to reduce erosion and sedimentation.
- Measures would be implemented during land-disturbing activities to reduce erosion and sedimentation. These measures may include mulches, soil binders and erosion control. Blankets, silt fencing, fiber rolls, temporary berms, sediment desilting basins, sediment traps, and check dams.
- Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around areas to be protected.
- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by wind and construction activities such as traffic and grading activities.
- All construction roadway areas would be properly protected to prevent excess erosion, sedimentation, and water pollution.
- All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state.
- All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.
- All construction materials would be hauled off-site after completion of construction.

BIO-4 The contractor shall dispose of all food-related trash in closed containers, and shall remove it from the project area each day during the construction period. Construction personnel will not feed or otherwise attract wildlife to the project area.

BIO-5 The contractor will not apply rodenticides or herbicides in the project area during construction activities.

BIO-6 Pre-construction environmental awareness training will be provided to all construction workers.

BIO-7 If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed.

BIO-8 Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

3.5 Cultural Resources

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

The information in this section is based on the *Cultural Resource Assessment for the Riverside County Transportation Department's Avenue 48 Widening Project, Cities of Coachella and Indio, Riverside County, California* prepared by Applied EarthWorks, Inc. (2018).

The project's impact area was established as the area that may be potentially directly and indirectly affected by the proposed project-related improvements (refer to Figure 3-7). The direct impact area includes the work limits and encompasses areas of construction associated with the proposed project. The vertical limits of the direct impact area associated with the project are generally expected to extend a maximum of approximately ten feet below the surface of the current grade; this maximum depth is associated with relocation of utility lines, one signal pole, and one street light pole. It is anticipated that all but the deepest excavations would be confined to previously disturbed sediments associated with existing Avenue 48 and project-area utilities.

The indirect area of impact takes into account areas where there is a potential to indirectly affect cultural resources through the introduction of visual, auditory, or atmospheric elements. While most of the proposed project components are at or below grade, it is anticipated that the maximum height of improvements (i.e., signal and street light poles) associated with the project would extend to approximately 35 feet in height. Given that the signal and street light poles are being relocated from their current location, the proposed project would not introduce any new significant visual intrusions into the area that could otherwise potentially constitute an indirect effect. As such, the impact area can be limited to the project's footprint of 7.9 acres.

An intensive pedestrian survey of the project's impact area (7.9 acres) was performed by Ken Moslak of Applied EarthWorks on September 7, 2017. The survey of the project area was conducted by walking parallel transects spaced at 10- to 15-meter (33- to 50-foot) intervals, when possible. The purpose of the survey was to identify the various conditions of the project area including the extent of hardscape, the overall degree of ground disturbance, and the character and nature of the area. All areas likely to contain or exhibit archaeologically or historically sensitive cultural resources were inspected carefully to ensure that visible, potentially significant cultural resources were discovered and documented. Additionally, the surveyor investigated any unusual landforms, contours, soil changes, features (e.g., road cuts, drainages), and other potential cultural site markers.

For purposes of this IS/MND, *cultural resources* are defined as any location that contains material culture greater than 45 years old. *Built-environment resources* are those that are associated with buildings (e.g., house, barns, or sheds), structures (e.g., roads, canals, or transmission lines), and objects (e.g., boundary markers). *Archaeological resources* consist of the physical remains of past human activity. An *archaeological site* is generally a locus of previous human activity at which the preponderance of evidence suggests repeated and patterned use over time, or multiple classes of activities. In contrast, an *isolated find* refers to one or more culturally modified and transportable objects representing a single activity, loci, or event that is not found in the context of a site as defined above. Finally, a *prehistoric resource* refers to a cultural resource that was used by Native Americans prior to direct contact with non-indigenous peoples; a *historical resource* includes cultural resources associated with non-indigenous peoples, as well as those used by Native Americans, after direct contact with non-indigenous peoples. In order for the material culture to be considered important and/or significant from an archaeological perspective, the material culture should retain some degree of integrity, as the contextual information is paramount in providing valuable insight and/or advancements in our understanding of prehistoric and historical human culture.

3.5.1 Affected Environment and Cultural Context

The project area is situated east of the Peninsular Ranges in the northern portion of the Coachella Valley at the western edge of the Colorado Desert. The Coachella Valley is bordered to the southwest by the San Jacinto and Santa Rosa mountains (part of the Peninsular Ranges) and to the northeast by the low, rolling Indio and Mecca Hills. From the steep slopes of the San Jacintos surmounted by San Jacinto 10,804 feet above msl, the desert floor descends sharply at less than two miles eastward to sea level at the City of Indio, approximately two miles from where the project is located.

Records Search Results

A cultural literature and records search was conducted at the Eastern Information Center (EIC) of the California Historical Resources Information System (CHRIS) on February 10, 2017. This search included the project area with an additional one-mile radius buffer that extended out from the project boundary (referred to as the project "study area"). The objective of this records search was to identify prehistoric and historic period archaeological and built-environment resources that had been previously recorded within the study area during prior cultural resource investigations. Results of the EIC record search are provided in Appendix A of the *Cultural Resources Assessment.*

Additional sources consulted during the archaeological literature and records search include the National Register of Historic Places (NRHP), the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File. There are no listed historic properties, historical resources, or historic landmarks recorded within the project study area.

Previously Conducted Cultural Resource Studies

Results of the records search indicate that 51 investigations have been conducted previously within a one-mail radius of the project study area (refer to Appendix C). Five of the previous investigations (e.g., RI-4577, RI-4828, RI-4829, RI-4830, and RI-5452) intersected portions of the proposed project area. As a result, approximately 70 percent of the project impact area has been investigated by previous studies.

Previously Recorded Cultural Resources

The archaeological records search indicated that 52 cultural resources have been identified previously within a one-mile radius of the project study area (refer to Appendix C). These cultural resources are made up of 31 prehistoric archaeological resources, seven historic-period archaeological resources, five multicomponent archaeological resources (containing both prehistoric and historic-period components), and nine built-environment resources. None of these previously documented resources are located within the project area.

FIGURE 3-7

CULTURAL RESOURCES PROJECT IMPACT AREA

COUNTY OF RIVERSIDE

AVENUE 48 WIDENING PROJECT

Source: Applied Earthworks, 2018

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The prehistoric archaeological sites found in the vicinity are primarily ceramic scatters, ceramic and lithic scatters, or ceramic and habitation debris scatters. The five multi-component sites consist of ceramic scatters or ceramic and lithic scatters that contain historical refuse. None of the prehistoric archaeological resources are located within or immediately adjacent to the project area.

The historic-period archaeological resources in the vicinity of the project area include early twentieth century refuse scatters, the remains of an orchard and irrigation system, house foundations, and a well. The built-environment resources are largely composed of residential and commercial buildings, the Whitewater Channel, the Southern Pacific Railroad, and Dillon Road. Although none of the historic-period resources or the built-environment resources are located within the project area, the historical alignment of Dillon Road (33-008410) terminates at Indio Boulevard just east of the project area. In addition, a historical multi-family residence, the Fred Young Farm Labor Center (33-017933), is located approximately 350 feet west of the project area on the north side of Avenue 48. Significance evaluations conducted on these historical built-environment resources indicate that neither is eligible for listing on the California Register.

Archival Map Research

A review of historical maps indicates that the recorded segment of Avenue 48 first appears in 1941 and was designated as a secondary highway. Historic aerials from 1953 show Avenue 48 as a one-lane road. Between 1953 and 1972, the road was widened from one to two lanes. Finally, between 2005 and 2009 Dillon Road was realigned to intersect Avenue 48 west of Indio Boulevard. A review of the 1956 Coachella, California, and the 1956 Indio, California, topographic quadrangles revealed that by the mid-1950s, a number of structures (likely residences) have been built along Avenue 48 between Van Buren Street and Bataan Street immediately adjacent to the project area.

3.5.2 *Impact Assessment*

Would the Project:

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

Less Than Significant Impact With Mitigation.

Archaeological Resources Evaluation

The Cultural Resource Assessment identified no archaeological resources within the project area. However, the lack of surface evidence of archaeological resources does not preclude their subsurface existence. Record search data indicate a number of prehistoric and historic-period archaeological sites have been recorded within one-mile of the project boundary. As such, intact subsurface archaeological deposits may be encountered during construction activities. It is therefore recommended that a qualified archaeological monitor be present during project-related ground-disturbing activities in undisturbed native sediments. With implementation of Mitigation Measures CUL-1 and CUL-2 impacts to cultural resources would be less than significant.

Historic Resources Evaluation

No prehistoric or historic-period archaeological resources were encountered during the intensive field survey.

Several historical buildings appearing to date to the 1950s and 1960s were observed during the survey along the north side of Avenue 48; however, the proposed project would not directly impact the referenced buildings. To ensure that no landscape features (e.g., walls, fences, or other decorative

structural elements) associated with these historical buildings (residences) would be directly impacted by the proposed project, historical aerials were examined by a properly qualified Architectural Historian. This review identified no landscape features within the project area that date to the historic period. As the project involves the widening of an existing street with most improvements occurring at or below grade, no long-term indirect visual or auditory impacts are anticipated to these historical residences. Given that no historical buildings or landscape features would be directly or indirectly impacted by the project, none of the residences were documented or evaluated as part of the *Cultural Resource Assessment.*

Only properties which meet the established criteria, as set out below, may be listed on or formally determined eligible for listing on the California Register of Historic Resources (CRHR). The Final Text of the CEQA Guidelines Revisions 15064.5 *Determining the Significance of Impacts to Archaeological and Historical Resources* defines a "historical resource" as any resource: (1) listed in or determined eligible for the CRHR by the State Historical Resources Commission; or (2) a resource included in a local register which meets the requirements of Section 5024.1(g) of the Public Resources Code; or (3) any object, building, structure, site, area, place, record, or manuscript which is determined to be significant by the lead agency, including those which meet the criteria for listing on the CRHR that:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2) Is associated with the lives of persons important in our past;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4) Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the cultural resource must also possess integrity of location, design, setting, materials, workmanship, feeling, and association.

The recorded segment of Avenue 48 does not appear to meet any of the criteria for listing on the CRHR. Archival research indicates that this segment of Avenue 48 was one of many roads constructed in Coachella during the early to mid-twentieth century. No information was found to suggest that this road was important to the development of Coachella, the Coachella Valley, Southern California, or the United States. Therefore, the recorded segment of Avenue 48 does not appear eligible for the CRHR under Criterion 1. Research has yielded no information to suggest that the road was constructed by, or is specifically associated with, a person important to local, state, or national history. Therefore, the recorded segment of Avenue 48 does not appear eligible for the CRHR under Criterion 2. This segment of Avenue 48 has been continuously modified over time due to use and maintenance, and as a result, is similar to most modern roads in the area. The materials and methods used to build Avenue 48 appear to be typical for the region and time period. In addition, the road is not an impressive or unique feat of engineering. Therefore, the recorded segment of Avenue 48 does not appear eligible for the CRHR under Criterion 3. Finally, this segment of Avenue 48 is unlikely to yield information important to prehistory or history and, as such, does not appear eligible for the CRHR under Criterion 4.

b) Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations Section 15064.5?

Less Than Significant Impact With Mitigation. With implementation of Mitigation Measures CUL-1 and CUL-2 impacts to cultural resources would be less than significant. Please also refer to Checklist Response 3.5.2 (a), above.

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

Less Than Significant Impact With Mitigation. The project site does not exhibit a formal cemetery and is not adjacent to any known formal cemeteries. The project site and vicinity have been surveyed for archaeological resources and no human remains interred outside formal cemeteries were detected during the survey. Given the disturbed nature of the project site, it is unlikely project construction would disturb any buried human remains. However, if human remains are discovered during construction, State Health and Safety Code Section 7050.5 (b) states that further disturbances and activities must cease in the area of the suspected human remains, and the County Coroner contacted and permitted to examine the remains. If the Coroner determines that the remains are of Native American origin, the Coroner must then notify the Native American Heritage Commission (NAHC) of the existence of the find within 24 hours. Pursuant to California Public Resource Code (PRC) Section 5097.98, the NAHC would then notify the Most Likely Descendant (MLD) of the discovery. The MLD has 48 hours of being granted access to the site to complete their inspection and make recommendations or preferences for treatment. The disposition of the remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts. Mitigation Measure CUL-3 would ensure impacts to buried cultural resources inadvertently discovered during construction would be less than significant.

3.5.3 Mitigation Measures

CUL-1 Prior to construction, cultural resource awareness and sensitivity training shall be provided to all construction crew members by a Secretary of Interior Standards qualified archaeologist and representative(s) from appropriate Native American Tribe(s) to ensure that the crew members are aware of the need for cultural resource monitoring, the monitoring protocol, and the work cessation and notification protocol.

CUL-2 Secretary of Interior Standards qualified monitor and Native American monitor from an appropriate Native American Tribe(s) shall monitor all ground-disturbing activities that extend into undisturbed native soils. In conjunction with the archaeological monitor, the Native American monitor shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. If a significant archaeological resource(s) is discovered on the property, ground disturbing activities shall be suspended 100 feet around the resource(s). The archaeological monitor, a representative of the appropriate Native American Tribe(s), and the Riverside County Transportation Department shall confer regarding the appropriate treatment and mitigation of the discovered resource(s). Work shall not resume in the area until mitigation has been completed or it has been determined that the archaeological resource(s) is not significant.

CUL-3 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner would notify the NAHC, which would determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

3.6 Energy

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.6.1 Affected Environment

The proposed project is located within developing areas of the Cities of Coachella and Indio and the County of Riverside, and would relieve traffic congestion in the area to allow for more efficient mobility. The project site is located along Avenue 48 and surrounded by single-family residential, commercial, retail/restaurant, institutional uses, and vacant land use.

3.6.2 Impact Assessment

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?

Less Than Significant Impact. The proposed project involves widening Avenue 48 within the City of Coachella, the City of Indio, and the County of Riverside, which is not considered a trip generating land use. The proposed project would relieve traffic congestion, increase mobility, and accommodate existing traffic conditions in the area, consistent with the *City of Coachella General Plan Mobility Element* and the *County of Riverside General Plan Circulation Element*. Therefore, the proposed project would be considered consistent with the current City and County General Plans. The proposed project would not create a new source of energy consumption during operation. During project construction, there would be a temporary consumption of energy resources due to the movement and operation of equipment and materials; however, the duration is limited and the area of construction is minimal. Compliance with federal, state, and local regulations, including current emission standards and related fuel efficiencies which limit idling times, maintaining construction equipment, and recycling construction debris, would reduce short-term energy demand during project construction to the extent feasible. Because the project involves widening an existing roadway, there are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than standard construction practices. Therefore, the project would have a less than significant impact relative to the consumption of energy resources.

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

No Impact. Both the County of Riverside and City of Coachella have adopted a Climate Actin Plan (CAP). The City of Indio does not have a CAP but has a Sustainability Best Practice Activities Plan. Riverside County CAP adopted a target of reducing GHG emissions to 15 percent below existing levels

within the County of Riverside by 2020. The City of Coachella CAP has an emissions reduction target of 15 percent below 2010 levels in 2020 and a reduction target of 49 percent below 2010 levels in 2035. The City's CAP builds on the 2013 General Plan Update, quantifying emissions from the build-out of the General Plan and includes additional policies and implementation actions to help Coachella further reduce emissions.

The City of Indio Sustainability Best Practice Activities document identifies and tracks Indio's best practice activities completed and counted as part of their participation in the climate change and sustainability recognition program, the Beacon Program. The Beacon Program is a statewide program recognizing cities and counties that are working to reduce greenhouse gas emissions, save energy and adopt policies and programs that promote sustainability.

The proposed project involves widening Avenue 48 from two lanes to five lanes and would relieve traffic and congestion by improving vehicular traffic circulation and access for motorists, residents, businesses, emergency service providers, nearby institutions such as schools, and public transportation. The proposed project would not conflict with the Riverside County CAP and the City of Coachella CAP as the project does not change the County's and City's land use designations and would not increase population beyond that considered in the General Plans. As noted in Table 3-11, the proposed project would implement project design features consistent with the CAPs and relevant General Plan policies. Therefore, implementation of the proposed project would not conflict with or obstruct state or local plans, policies, or regulations adopted related to renewable energy or energy efficiency.

3.6.3 Mitigation Measures

No mitigation measures are proposed.

3.7 Geology and Soils

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.7.1 Affected Environment

The project site is located within the Western Coachella Valley which is traversed by several active and potentially active fault zones. Because the project area is located in a seismically active southern California region, the project area would likely experience strong seismic ground shaking during a seismic event. According to the City of Coachella General Plan, Figure 3-9, Faults and Historical (1800 - 2011) Seismicity Map (City of Coachella 2015), and the Western Coachella Valley Area Plan, Figure 13, Seismic Hazards (County of Riverside 2017), the project site is not located within a designated Alquist-Priolo Earthquake Fault Zone. However, several faults are located in proximity to the project site. The potential for damage resulting from seismic-related events exists within the City of Coachella, the

City of Indio, and the County of Riverside. Seismic hazards include ground shaking, ground failure, ground displacement, and liquefaction.

Regional Faults

No known faults traverse the project area; however, the following three significant faults are located in proximity to the project site and traverse the City of Coachella in a northwest to southeast direction (City of Coachella 2015b), and could potentially affect the project area:

San Andreas Fault: Located approximately three miles east of the City of Coachella, the San Andreas Fault Zone is a major structural feature that forms at the boundary between the North American and Pacific tectonic plates. It extends from the Salton Sea in Southern California to north of Point Arena along the northern California coast, where the fault trace extends out into the Pacific Ocean. In the south, the San Gabriel Mountains roughly denote the path of the San Andreas Fault. This fault has a maximum movement magnitude of 6.8 to 7.9.

The San Jacinto Fault: Located approximately 22 miles southwest of the City of Coachella. This fault zone is divided from north to south into: San Bernardino section, San Jacinto Valley section, Anza section, Coyote Creek section, Borrego Mountain section, Superstition Hills section, and Superstition Mountain section. This fault has a maximum movement magnitude of 7.2.

The Elsinore Fault: Located approximately 40 miles southwest of the City of Coachella. The Whittier-Elsinore Fault is a major strike-slip fault zone that is part of the San Andreas Fault system. The fault has been divided into sections, from north to south: Whittier section, Chino section, Glen Ivy section, Temecula section, Julian section, Coyote Mountain section, and Laguna Salada section. This fault has a maximum movement magnitude of 7.1.

Soils

The USDA Soil Conservation Service Soil Survey Maps were searched for available soils within the project site. Soils present at the subject site are listed below (Michael Baker International 2018c):

Gilman silt loam, 0 to 2 percent slopes (GeA): The landform for this is alluvial fans and the parent material is alluvium. The Gilman silt loam, 0 to 2 percent slopes, is well drained with more than 80 inches depth to the water table. Runoff class is low. The flooding frequency is rare and no ponding frequency is associated with this soil.

Indio very fine sandy loam (Is): The landform for this soil is alluvial fans and the parent material is alluvium. The Indio very fine sandy loam is moderately well drained, with more than 80 inches depth to the water table. The runoff class is low. There is no flooding frequency or ponding frequency associated with this soil.

3.7.2 *Impact Assessment*

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.

and;

ii. Strong seismic ground shaking?

No Impact. As noted above, the project site is not located within a designated Alquist-Priolo Earthquake Fault Zone. However, the project site is located in a seismically active region within the influence of several fault systems that are considered to be active or potentially active. The closest active faults in the project area include the San Andres, San Jacinto and Elsinore faults described above. The project site, like much of southern California, would be subject to ground shaking in the event of an earthquake; however, the project does not propose construction of any habitable structures. Therefore, the potential for seismic ground shaking would not represent a significant new hazard to people or structures. The proposed project would be designed and constructed to meet current applicable engineering standards related to compliance with pertinent seismic safety requirements; therefore, project impacts related to seismic ground shaking would not directly or indirectly impact people or structures and no mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is a process by which sediments below the water table temporarily lose strength and behave as a liquid rather than a solid. In the liquefied condition, soil may deform enough to cause damage to buildings and other structures. Seismic shaking is the most common cause of liquefaction. Liquefaction occurs in loose sands and silts in areas with high groundwater levels. According to the City of Coachella General Plan EIR, Figure 4.5-4, Ground Shaking Risk (City of Coachella 2014), and the Western Coachella Valley Area Plan, Figure 13, Seismic Hazards (County of Riverside 2017), the project site is located within an area identified as a "High" for liquefaction susceptibility. The potential for liquefaction depends on the levels of shaking, groundwater conditions, the relative density of the soils, and the age of the geologic units. While the project site has been identified as being within a high liquefaction zone, the project will be designed to adhere to pertinent standard engineering practices and design criteria relative to seismic hazards related to liquefaction. The project would not expose people or structures to seismic-related ground failure impacts, therefore, impacts associated with seismic-related ground failure, including liquefaction, would be less than significant and no mitigation is required.

iv. Landslides?

No Impact. Seismically-induced landslides tend to occur in areas with weak soil and rock on sloping terrain. As illustrated in the City of Coachella General Plan EIR, Figure 4.5-6, Landslide Risk (City of Coachella 2014) and the Western Coachella Valley Area Plan Figure 14, Steep Slope (County of Riverside 2017), the project site and immediate surrounding area are relatively level with a low potential for landslides. Development of the project would not create large slopes on the project site. Therefore, implementation of the proposed project would not expose people or structures to substantial adverse effects involving landslides. No significant impacts would occur and no mitigation is required.

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

Less Than Significant Impact. The proposed project involves widening of an existing roadway. During construction soils and sediment would be graded, excavated, removed from the site, recompacted, and filled, which would expose areas of soil to wind and water erosion. The project would comply with National Pollutant Discharge Elimination System (NPDES) requirements for control of discharges of sediments and other pollutants during construction. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared and submitted to the State Water Resources Control Board. A SWPPP specifies Best Management Practice's (BMPs) that would prevent construction-related pollutants from contacting stormwater with the intent of keeping products of erosion from moving off-site into receiving waters. Typical measures to prevent wind and water erosion may include, but are not limited to, application of water during earthwork activities, flattened cut and fill slopes, sand bags, straw waddles, and no work on high wind days. The project would obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit). The SWPPP would also require preparation of an Erosion and Sediment Control Plan.

The project site is relatively flat, with little variation in topography. The existing area of impervious surface within the project limits is approximately 4.9 acres, whereas the area of impervious surface after project improvements is estimated to be approximately 6.4 acres. Therefore, the proposed project is anticipated to result in a total increase of approximately 1.5 acres of net new impervious surface as compared to existing conditions. Alteration to the project site would not result in substantial changes in topography or create erosion or unstable conditions. Since the site would continue to have primarily impervious surfaces and since the soil would not be exposed following completion of the project, the potential for erosion and/or unstable conditions is remote during operation.

Compliance with existing state, regional, and local regulations, NPDES permit requirements, implementation of project-specific BMPs identified in the SWPPP, and monitoring of construction and subsequent post-construction phase BMPs, would ensure that project impacts with respect to topsoil loss and soil erosion would be less than significant and no mitigation is required.

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 Impact. As discussed in Checklist Responses 3.6.2 (a) iii above, the project site is designated as being located in an area as "High" liquefaction susceptibility. As discussed in Checklist Response 3.6.2 (a) iv above, the project site is not located in an area subject to on- or off-site landslides. Land subsidence is the gradual, local setting or shrinking of the earth's surface with little or no horizontal motion. Subsidence may also be caused by liquefaction, groundwater withdrawal, oil or gas withdrawal, and hydroconsolidation. During very large earthquakes, it is possible for subsidence or seismically induced settlement to occur in loose granular soils in flat or gently sloped portions of areas as the result of intense ground shaking. The City of Coachella is considered to have active subsidence, and this can be a long-term hazard to existing and future development (Riverside County 2014a). Liquefaction and subsidence would be addressed during engineering design for the project and all earthwork would be performed in accordance with the current and pertinent engineering; therefore, impacts associated with unstable geologic units or soil, would be less than significant and no mitigation is required.

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?

No Impact. As described above in Section 3.6.1, the USDA Soil Conservation Service Soil Survey Maps indicate that there are no expansive soil types in the project area. Therefore, no impacts would occur related to expansive soils and no mitigation is required.

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. The proposed project does not include the development of housing or other uses that would require either septic tanks or alternative wastewater systems. No impacts would occur and no mitigation is required.

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

Less Than Significant Impact. Given the extensive ground disturbance in the project area and development of Avenue 48, any superficial paleontological resources that may have existed at one time have likely been previously unearthed by past development activities. The project area is in an area designated as "Undetermined Sensitivity" in the City of Coachella General Plan Draft EIR (City of Coachella 2017a). During construction, excavation would be approximately five feet below the current grade with the exception of the new signal pole and relocated street light pole, requiring excavation to an anticipated maximum depth of 10 feet. It is anticipated that all but the deepest excavations would be confined to previously disturbed sediments associated with existing utilities and the construction and maintenance of Avenue 48. Due to the extensive disturbances caused by commercial, residential, and transportation corridor development within the project area, there is a low potential for paleontological resources to be encountered during project construction. Therefore, impacts related to paleontological resources or unique geological features would be less than significant, and no mitigation is required.

3.7.3 Mitigation Measures

No mitigation measures are proposed.

3.8 Greenhouse Gas Emissions

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Information in this section is based on the *Avenue 48 Widening Project – Air Quality / Greenhouse Gas Emissions Technical Memorandum* prepared by Michael Baker International (2018a).

3.8.1 Regulatory Environment

Federal

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

United States Environmental Protection Agency Endangerment Finding. The USEPA authority to regulate GHG emissions stems from the United States Supreme Court decision in Massachusetts v. USEPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the USEPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, nitrous oxide [N_2O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) constitute a threat to

public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the USEPA's assessment of the scientific evidence that form the basis for the USEPA's regulatory actions.

Federal Vehicle Standards. In response to the United States Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the USEPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012-2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, USEPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the USEPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program would apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the USEPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the USEPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The United States Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the USEPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13783. Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

State

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team, made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-13-08. Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of State's first climate adaptation strategy. This will result in consistent guidance from experts on how to address climate change impacts in the state of California.

Executive Order S-14-08. Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. Executive Order S-20-04, the California Green Building Initiative, (signed into law on December 14, 2004), establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building

efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002) which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 32 (AB 32) - California Global Warming Solutions Act of 2006. California passed the California Global Warming Solutions Act of 2006 (AB 32; *California Health and Safety Code* Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. When fully phased in, the near-term standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards will result in a reduction of about 30 percent.

Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council) under the California Workforce Investment Board. The Green Collar Jobs Council will develop a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

California Air Resources Board Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve the California GHG reductions required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California would implement to reduce the projected 2020 "Business as Usual" emissions to 1990 levels, as required by AB 32. These strategies are intended to reduce carbon dioxide equivalent (CO_2eq) emissions by 174 million metric tons (MT). This reduction of

42 million MT CO_2eq, or almost 10 percent from 2002 to 2004 average emissions, would be required despite the population and economic growth forecasted through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as those expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. When CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32. On February 10, 2014, CARB released the draft proposed first update. On May 22, 2014, CARB approved the First Update to the AB 32 Scoping Plan. The update also defines CARB's climate change priorities for the next five years, and sets the groundwork to each long-term goal set forth in Executive Orders S-3-05 and B-15-2012. Lastly, the update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan, and evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities in water, waste, natural resources, clean energy, transportation, and land use.

Local

City of Indio Sustainability Best Practice Activities

The City of Indio Sustainability Best Practice Activities document identifies and tracks Indio's best practice activities completed and counted as part of their participation in the climate change and sustainability recognition program, the Beacon Program. The Beacon Program is a statewide program recognizing cities and counties that are working to reduce greenhouse gas emissions, save energy and adopt policies and programs that promote sustainability. The municipal measure identified in the Sustainability Best Practice Activities document includes practices related to energy efficiency and conservation, water and wastewater systems, green building, waste reduction and recycling, climate friendly purchasing, renewable energy and low-carbon fuels, efficient transportation, land use and community design, open space and offsetting carbon emissions, and promoting community and individual action.

City of Coachella Climate Action Plan

On April 22, 2015, the City of Coachella adopted a CAP in conjunction with a General Plan Update as a roadmap for achieving community-wide GHG emissions reductions. Coachella's CAP is a proactive step toward addressing the climate challenge to protect our children and grandchildren before climate change becomes irreversible. The CAP builds on the 2013 General Plan Update, quantifying emissions from the build-out of the General Plan and includes additional policies and implementation actions to help Coachella further reduce emissions. It also includes strategies to protect public health and make the community more resilient to climate change. Coachella's CAP is designed to provide clear policy guidance to the City staff and decision makers on how to reduce GHG emissions. It identifies a pathway to reduce emissions within a range of voluntary, state-level emissions reduction targets. This path includes strategies for improving connectivity and land use patterns, transportation modes and systems, incorporating energy efficiency standards, increasing the City's renewable energy supply, and reducing waste and consumption.

Riverside County Climate Action Plan

The County of Riverside adopted a CAP on December 8, 2015. Consistent with the CARB Scoping Plan, the CAP adopted a target of reducing GHG emissions down to 15 percent below existing levels within the County of Riverside by 2020. The CAP also provides the specific criteria that new development must follow to ensure that the reduction measures associated with new development are implemented and the

reduction target is met. Additionally, it provides a set of community-wide GHG emissions inventories that are anticipated without the reduction measures, and reduced levels of 2020 GHG emissions, which demonstrates how the implementation of reduction measures achieves the reduction target. The County provides various methods for determining project-level consistency with the CAP, including screening tables and a threshold of 3,000 metric tons of carbon dioxide equivalent ($MTCO_2eq$). The screening tables provide guidance in measuring GHG reductions attributable to certain design and construction measures incorporated into development projects, while the 3,000 $MTCO_2eq$ threshold is provided for smaller projects that would not be able to provide the reductions expected from the screening tables or alternate emission analysis method.

South Coast Air Quality Management District Thresholds

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last CEQA Significance Threshold Working Group meeting (Meeting No. 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.

With the tiered approach, the project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 $MTCO_2eq$ per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the Tier 4 second option the project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2eq$ per service population (SP) per year. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a "service population" basis (the sum of the number of jobs and the number of residents provided by a project) such that the project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed use).

For the proposed project, the 3,000 $MTCO_2eq$ per year threshold is used as the significance threshold, in addition to the qualitative thresholds of significance set forth below from Section VII of Appendix G to the CEQA Guidelines. This threshold is consistent with the recently adopted County CAP as well as the proposed SCAQMD non-industrial screening threshold.

3.8.2 Affected Environment

Emissions of GHGs related to human activity include the following constituents: CO_2, CH_4, N_2O, NO_X, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane). Methane (CH_4) is also an important GHG that potentially contributes to global climate change. California is a substantial contributor of global GHGs, emitting over 400 million tons of carbon dioxide (CO_2) per year. Climate studies indicate that California is likely to see an increase of three to four degrees °F over the next century. According to CARB's *California's 2017 Climate Change Scoping Plan* (California Air Resources Board 2017), the transportation sector contributes 37 percent of the GHG emissions in California. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

3.8.3 Impact Assessment

Would the Project:

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

Less Than Significant Impact.

Construction-Related Emissions

Project-related GHG emissions would result from construction activities over the construction period, and would include direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment. Transport of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon project completion. Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions. Table 3-9 presents the estimated CO_2, CH_4, and N_2O emissions of the proposed project. The CalEEMod outputs are contained within the Appendix A, Air Quality/Greenhouse Gas Emissions Data. As shown in Table 3-9, the proposed project would result in 214.50 $MTCO_2eq$ (7.15 $MTCO_2eq$ when amortized over 30 years), which is well below SCAQMD's 3,000 $MTCO_2eq$/year screening threshold.

TABLE 3-9 ESTIMATED CONSTRUCTION RELATED GREENHOUSE GAS EMISSIONS

SOURCE	CO_2	CH_4		N_2O		TOTAL METRIC TONS OF CO_2eq
	Metric Tons/yr	Metric Tons/yr	Metric Tons of CO_2eq[1]	Metric Tons/yr	Metric Tons of CO_2eq[1]	
Construction Emissions						
Total emissions	212.94	0.06	1.50	0.00	0.00	214.50
Total emissions (amortized over 30 years)	7.10	0.00	0.05	0.00	0.00	7.15

Notes:
1. CO_2 Equivalent values calculated using the USEPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed May 2018.
2. Totals may be slightly off due to rounding. Due to rounding, the results given by the equation calculations used in the Greenhouse Gas Equivalencies Calculator may not return the exact results shown in CalEEMod.

Source: Michael Baker International 2018b.

Operation-Related Emissions

Although the project involves roadway improvements and does not propose a trip-generating land use, the transportation-related GHG emissions associated with the existing, forecast year 2038 Without Project and With Project scenarios have been calculated based on EMFAC2014 Emission Factors. The proposed project would result in improvements to Avenue 48 in order to make it consistent with the City of Coachella's General Plan Mobility Element and the County of Riverside Circulation Element and relieve existing and forecast traffic congestion in the project area.

Table 3-10 compares the existing and future annual vehicle miles traveled (VMT) and GHG emissions. Based on traffic data provided by County of Riverside Transportation Department (August 2018), the existing annual VMT in the project area is approximately 1,747,766, while the annual VMT in the project area would be 3,788,627 for the forecast year 2038 without and 4,721,239 for the forecast year 2038 with project scenarios. The VMT between the forecast year without and with project scenarios is 932,612. The VMT between the existing and future scenarios is attributed to projected economic and population growth in the area, and is not a direct result of project implementation.

As depicted in Table 3-10, the resulting net emissions between the existing and the forecast year 2038 With Project scenario would be 793 metric tons of carbon dioxide ($MTCO_2$), (800.15 $MTCO_2$ per year with amortized construction emissions), which is well below the 3,000 $MTCO_2eq$/year GHG emissions threshold adopted by the County of Riverside and proposed by the SCAQMD. Therefore, as the project would relieve congestion and improve roadway operations, and would not directly generate new trips or GHG emissions, GHG impacts would be less than significant.

TABLE 3-10 VEHICLE MILES TRAVELED AND GREENHOUSE GAS EMISSIONS

SCENARIO	ANNUAL VMT[1]	EMISSIONS (METRIC TONS PER YEAR)[2, 3]
		CO_2
Construction (total of 133.26 $MTCO_2eq$ amortized over 30 years)	N/A	7.15
Existing (2017)	1,747,766	741
Opening Year (2019)[4]	1,808,758	737
Forecast Year 2038 Without Project	3,788,627	1,231
Forecast Year 2038 With Project	4,721,239	1,534
Net Difference Between the Existing and the Forecast Year 2038 With Project Scenarios	2,973,473	793
Net Difference Between the Forecast Year 2038 Without and With Project Scenarios	932,612	303

VMT = Vehicle Miles Traveled; CO_2 = carbon dioxide; N/A = Not Applicable
Notes:
1. VMT is based on traffic data provided by the Riverside County Transportation and Land Management Agency, August 2, 2018.
2. Emissions calculated using EMFAC2014.
3. Totals may be slightly off due to rounding.
4. Opening Year With Project and Without Project traffic volumes would be the same.

Source: Michael Baker International 2018b.

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

No Impact. Both the County of Riverside and the City of Coachella have adopted CAPs. The City of Indio has a Sustainability Best Practice Activities plan, but does not have a qualified CAP. The Riverside County CAP established goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste reduction, economic development and open space and natural habitats by completing GHG inventories of community-wide and municipal sources and establishing a GHG reduction target of 15 percent decrease from 2008 levels, consistent with AB 32. The City of Coachella CAP has an emissions reduction target of 15 percent below 2010 levels in 2020 and a reduction target of 49 percent below 2010 levels in 2035. The CAP analyzes policies from the General Plan that reduce energy use, vehicle miles traveled, resource consumption, and GHG emissions, comparing the emissions to voluntary statewide emissions targets outlined in the CARB Scoping Plan and Executive Order S-03-05.

Table 3-11 discusses the project's consistency with the applicable policies that would contribute to GHG reductions and sustainable practices in the County and City of Coachella. The City of Indio has a Sustainability Best Practice Activities plan, but does not have any measures that are applicable to the proposed project.

TABLE 3-11 CONSISTENCY WITH CLIMATE ACTION PLANS

CAP GREENHOUSE GAS REDUCTION MEASURE	PROJECT CONSISTENCY
Riverside County Climate Action Plan[1]	
Measure R2-T5: Roadway Improvements including Signal Synchronization and Transportation Flow Management.	**Consistent.** The project proposes the widening of the existing roadway, which would require traffic signal coordination and result in improvement of traffic flow and smoother traffic movement with minimal stops/idling.
City of Coachella General Plan[2] and Climate Action Plan[3]	
Pedestrian Connectivity. Provide pedestrian connections to the external pedestrian network.	**Consistent.** The project includes sidewalks where none currently exist. Additionally, the road connects the City of Coachella, the City of Indio, and the unincorporated area of the County of Riverside. The proposed project would improve circulation for motorists, public transportation vehicles, and pedestrians.
Adequate Sidewalks. Provide side sidewalks on both sides of streets in neighborhoods.	**Consistent.** The project design includes sidewalks on both sides of the roadway.
Traffic Calming. Apply traffic calming techniques to residential streets to limit cut-through traffic and speeding on roadway streets.	**Consistent.** Refer to Response to Riverside County CAP Measure R2-T5.

Sources:
1. County of Riverside Transportation and Land Management Agency and Planning Department, *County of Riverside Climate Action Plan*, December 2015.
2. City of Coachella, *City of Coachella General Plan Update 2035*, April 22, 2015.
3. City of Coachella, *City of Coachella Climate Action Plan*, April 22, 2015.

Source: Michael Baker International 2018b.

The proposed project involves widening Avenue 48 from two lanes to five lanes and would relieve traffic and congestion by improving vehicular traffic circulation and access for motorists, residents, businesses, emergency service providers, nearby institutions such as schools, and public transportation. The proposed project would not conflict with the Riverside County CAP and the City of Coachella CAP as the project does not change the County's and City's land use designations and would not increase population beyond that considered in the General Plans. As noted above, the proposed project would implement project design features consistent with the CAPs and relevant General Plan policies. In addition, the project would be subject to applicable Federal, State, and local regulatory requirements, further reducing project-related GHG emissions. The project would not conflict with or impede implementation of reduction goals identified in AB 32 and other strategies to help reduce GHG emissions. Therefore, implementation of the proposed project would not affect any plans, policies, or regulations adopted for the purpose of reducing GHG emissions. No impact would be anticipated in this regard.

3.8.4 Mitigation Measures

No mitigation measures are proposed.

3.9 Hazards and Hazardous Materials

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Information in this section is based on the *Phase I Environmental Site Assessment* (Phase I ESA) prepared by Michael Baker International (2018c).

3.9.1 Affected Environment

The Phase I ESA was prepared in accordance with the standard practice set forth in ASTM International (ASTM) E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The purpose of the Phase I ESA was to identify Recognized Environmental Conditions (RECs) at the project area. RECs are defined in ASTM E 1527-13 Standard Practice as "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1.) due to any release to the environment; (2.) under conditions indicative of a release to the environment; or (3.) under conditions that pose a material threat of a future release to the environment."

As a result of the review of pertinent regulatory records and files conducted in conjunction with preparation of the Phase I ESA (2018c), on- and off-site, adjoining, and adjacent properties representing potential regulatory sites of concern were identified and evaluated with respect to the sites potentially representing a REC on/near the project area. Table 3-12 lists the regulatory sites of concern, their location with respect to the project area, and the finding related to whether or not each respective site represents a REC on/near the project area (for a complete list of sites identified and their status, refer to Appendix B of the *Phase I Environmental Site Assessment* [2018c]). As shown in Table 3-12, the Phase I ESA prepared for the proposed project revealed no evidence of RECs in connection with the project site.

TABLE 3-12 IDENTIFIED REGULATORY SITES OF POTENTIAL CONCERN

SITE NAME/ADDRESS	DIRECTION FROM PROJECT SITE	SITE STATUS	CONCLUSION / FINDING
Van Buren Street and Avenue 48	On-Site	Reported in the CHMIRS database on October 27, 1989. Chemical of concern and containment not reported.	No REC
EZ Serve Truck Stop E-Z Serve #100858 Mc Adams Truck & Diesel SR & DH Corporation 84425 Indio Boulevard Indio, CA 92201	Adjoining the eastern portion of the subject site to the north	Reported historical gasoline service station from 1991 to 2014. Reported LUST leaked gasoline to groundwater. Case was referred to the Water Board and closed on September 9, 2014. Reported in the HIST CORTESE database. Reported in the UST database with a total of three tanks.	No REC
Indio Coachella Truck TRML ARCO Facility No. 05826 ARCO AM/PM Prestige Stat #5364 ARCO AM/PM #83022 48055 Highway 111 Coachella, CA 92236	Adjoining the eastern portion of the subject site to the south	Reported in the Cortese database. HAZNET waste categories include unspecified organic liquid mixture. Disposal method reported as recycler. Reported small quantity generator with no violations found. Reported in the FINDS database. Four USTs reported in SWEEPS UST database used for M.V. fuel. Reported LUST leaked gasoline to groundwater. Cased closed on April 21, 2011. Reported in the HIST CORTESE database. Reported NPDES permit certified on June 11, 2013.	No REC
U.S. Auto Salvage (U.S. Metals) US Metals Inc. 84481 Cabazon Road Indio, CA 92201	Adjacent 286 feet to the northeast	Reported in the ENVIROSTOR database as active as of September 4, 2014. Potential contaminants of concern include: arsenic, PCBs, TPH-Motor oil, and lead. Reported in the VCP database as part of the DTSC Site Cleanup Program with a past use of recycling scrap metal. The site is currently in the CEQA Initial Study/ Environmental Impact Report phase. Reported in the HAULERS (Registered Waste Tire Haulers Listing) database. A one ton cylinder half full of chlorine gas was punctured resulting in a small release in 2010 and reported in the CHMIRS database. Reported recycling facility as of 2005	No REC

Source: Michael Baker International 2018c.

As it relates specifically to U.S. Auto Salvage as listed above in Table 3-12, upon completing the file review conducted in conjunction with preparation of the Phase I ESA it was confirmed that the releases to this property were to soil only. Given that this property is located approximately 286 feet away from the project area, this is too far for soil vapor migration. Furthermore, there is not known release to groundwater at this off-site facility/business. Thus, and based on the file review conducted in support of

the Phase I ESA, this off-site property has a low potential for affecting groundwater/soil gas at the project site.

3.9.2 Impact Assessment

Would the Project:

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. The proposed project would not increase the transport, use, or disposal of hazardous materials. Project-related construction activities would be short-term and would involve limited transport, storage, use and disposal of hazardous materials associated with construction. Materials used in the construction of the project are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the Department of Toxic Substances Control (DTSC), the USEPA, and the Occupational Safety and Health Administration (OSHA). Adherence by the construction contractor to these agencies' regulations would reduce hazards associated with the routine transport, use, and/or disposal of hazardous materials from construction to a less than significant level; therefore, impacts in this regard are considered less than significant and no mitigation is required.

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 With Mitigation. The Phase I ESA did identify the presence of lead-based paints (LBPs) in traffic striping materials and polychlorinated biphenyls (PCBs) potentially present in pole-mounted transformers, which may be disturbed during project construction.

LBPs were commonly used in traffic striping materials before the discontinued use of lead chromate pigment in traffic striping/marking materials and hot-melt thermoplastic stripe materials (discontinued in 1996 and 2004, respectively). Traffic striping was observed along Avenue 48, Dillon Road, Van Buren Street, Luzon Street, Bataan Street, and Indio Boulevard during the May 16, 2018 site visit. Therefore, LBPs may be present within traffic striping. However, traffic striping was noted to be in good condition. As the on-site striping materials is currently contained, and no visible evidence to suggest the release of LBPs into the environment was observed. However, disturbance of traffic striping materials may occur during construction of the proposed project. Implementation of Mitigation Measure HAZ-1 would ensure that disturbance of traffic striping materials is conducted pursuant to Caltrans Standard Special Provisions pertaining to testing and proper removal.

PCBs were used in electrical transformers manufactured between 1929 and 1977. Utility companies have replaced most PCB containing transformers over the past 20 years, and transformers are not considered an environmental concern unless they are leaking. Multiple pole-mounted electrical transformers were observed along Avenue 48, within the project site boundary. Implementation of the proposed project could result in the removal/relocation of these transformers. These pole-mounted transformers appear to be in fair condition and no evidence of di-electric fluid or staining was observed. No leaking transformers were identified during the site survey. However, the pole-mounted transformers present on-site could contain PCB material. Construction of the project could require the removal/relocation of these transformers. Implementation of Mitigation Measure HAZ-2 would ensure the proper handling/removal of transformers during site disturbance activities.

There is the potential to encounter unknown hazardous materials in soils during site disturbance activities, which present a concern to workers and the public during construction. However, implementation of

Mitigation Measure HAZ-3 would ensure the proper handling/removal of a previously unknown hazardous materials should any be encountered during construction activities.

Given the above, impacts related to the project creating 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 are considered less than significant with implementation of Mitigation Measures HAZ-1 through HAZ-3.

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. Martin Van Buren Elementary School is located within one-quarter of a mile of the project site. As discussed in Checklist Responses 3.9.2 (a) and (b), construction activities would be short-term and would involve limited transport, storage, use and disposal of hazardous materials associated with construction. The project involves widening an existing roadway and does not include the development of any uses that would involve the use, storage, or transport of hazardous materials and would not result in hazardous emissions or require the handling of acutely hazardous materials. Adherence to local, state, and federal regulations would reduce impacts to a less than significant level and no mitigation is required.

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. Based on the records search conducted in support of this analysis, it was determined that the project site is not included on a list of hazardous materials sites listed pursuant to Government Code Section 65962.5. Therefore, no impact would result in this regard and no mitigation is required.

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 site is not within an airport land use plan, or within two miles of a public airport or public use airport. The nearest airport to the project site is the Jacqueline Cochran Regional Airport, where the runway is located approximately 4.95 miles to the southeast of the project site. Therefore, the proposed project would not result in a safety hazard or excessive noise (refer to Section 3.13 for the noise analysis) for people residing or working in the project area. No impact would occur, and no mitigation is required.

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

Less Than Significant Impact. As discussed in Checklist Response 3.17.2, Transportation, temporary lane closures and striping would occur during project construction; however, two-way travel along Avenue 48 through the project corridor would be maintained during construction activities with at least one travel lane open in each direction at all times. A Traffic Control Plan (TCP) would be prepared and may include, but not be limited to, designated construction routes, designated construction parking areas, appropriate detours, safety precautions, and the use of changeable message signs. Therefore, the proposed project is not anticipated to interfere with an adopted emergency response plan or emergency evacuation plan; impacts would be less than significant and no further mitigation is required.

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

No Impact. The project site is not located within a wildfire severity zone as shown on the Western Coachella Valley Area Plan, Figure 12, Wildfire Susceptibility (County of Riverside 2017). Because the project involves widening an existing roadway in developed areas of the City of Coachella, the City of Indio, and the County, it is anticipated to have a low probability for causing a wildland fire. The project does not include habitable structures; therefore, the project would not expose people or structures, either directly or indirectly, to a significant risk involving wildland fires. Therefore, no impact would occur in this regard and no mitigation is required.

3.9.3 Mitigation Measures

HAZ-1 Should the project require disturbance of traffic striping materials, the testing and removal of these materials shall be conducted consistent with Caltrans Standard Special Provisions for *Remove Traffic Stripe and Pavement Markings*.

HAZ-2 Any transformer to be relocated/removed during site construction/demolition activities shall be conducted under the purview of the local utility company to identify proper-handling procedures regarding PCBs consistent with Title 22, Division 4.5 of the CCR, and other appropriate regulatory agencies.

HAZ-3 As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction. If soil contaminated by hazardous waste is discovered during construction, proper hazardous waste handling and emergency procedures under 40 CFR § 262 and Division 4.5 of Title 22 California Code of Regulations shall be followed.

3.10 Hydrology and Water Quality

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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 groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off- site;	☐	☐	☒	☐
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	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.10.1 Regulatory Environment

The project site is located within the jurisdiction of the Colorado River RWQCB, Region 7. Project-related construction would disturb more than one acre of ground; therefore, the County would be required to electronically file an Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) via their Storm Water Multiple Application and Report Tracking System (SMARTS) website, as required by Section 402 of the CWA, Adopted Order 2009-0009-DWQ Construction General Permit (as amended by 2012-006-DWQ; NPDES No. CAS000002), and by the California Porter-Cologne Water Quality Protection Act, as amended 2016. As mandated by the General Construction Permit, the project would develop a SWPPP that would direct how stormwater and accidental non-stormwater discharges would be avoided, minimized, or contained during the course of construction. The SWPPP would be uploaded to the SWRCB's SMARTS website as part of the project's Notice of Intent.

The project site is located in the Western Coachella Valley, which lies within the Whitewater River Watershed region. The Coachella Valley Stormwater Channel is the major receiving water body to the project area and is located approximately 0.85 mile from the project area. The Coachella Valley Stormwater Channel is a segment of the Whitewater River that has been lined with concrete to improve flood protection (Riverside County 2017). The project would comply with the municipal separate storm sewer system (MS4s) in the Whitewater River Basin, permitted under NPDES Permit No. CAS617002 (Board Order No. R7-2013-0011) regarding post-construction discharges from the MS4s. The SWRCB's Municipal Storm Water Program regulates storm water discharges from MS4s throughout California. Storm water permits are required for discharges from an MS4 serving a population of 100,000 or more. USEPA defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State (SWRCB 2018).

The permit requires standard design and post-development BMP guidance to be incorporated into projects for streets, roads, highways, and freeway improvements, under the jurisdiction of the Co-Permittees to reduce the discharge of post-construction pollutants from the projects to the Maximum Extent Practicable. The guidance is provided by Low Impact Development: Guidance and Standards for Transportation projects for the Colorado River Region Riverside County Co-Permittees, and applies to public transportation projects in the area covered by the Colorado River Region MS4 Permit, which involves the construction of new transportation surfaces or the improvement of existing transportation surfaces (including Class I Bikeways and sidewalks).

3.10.2 *Impact Assessment*

Would the Project:

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

Less Than Significant With Mitigation. The potential impacts of construction activities on water quality focus primarily on sediments, turbidity, and pollutants that adhere to sediments. Construction-related activities that expose and move soils are primarily responsible for sediment releases. Project construction associated with the road widening would include grading, paving, and roadway construction. These project activities could result in wind and rain erosion of the existing onsite soils and could increase the amount of suspended solids contained in storm flows due to erosion of exposed soils. Non-sediment potential contaminants that could enter water runoff from the construction site include paints, solvents, metals, oil, gasoline, petroleum products, concrete-related products, chemicals, and trash. All of these contaminants could contribute to the degradation of water quality. According to the Transportation Improvement Project NPDES Data Form prepared by the County of Riverside (2018), the proposed project's Sediment Risk Factor is 3.72 tons/acre, which equates to a Low Sediment Risk (i.e., less than 15 tons/acre).

Project-related construction would disturb more than one acre of ground; therefore, the County would be required to file a NOI with the SWRCB via their Storm Water Multiple Application and Report Tracking System SMARTS website, as required by Section 402 of the CWA, Adopted Order 2009-0009-DWQ Construction General Permit (as amended by 2012-006-DWQ; NPDES No. CAS000002), and by the California Porter-Cologne Water Quality Protection Act, as amended 2016. As mandated by the General Construction Permit, the project would develop a SWPPP that would direct how stormwater and accidental non-stormwater discharges would be avoided, minimized, or contained during the course of construction. The SWPPP would be uploaded to the SWRCB's SMARTS website as part of the project's Notice of Intent.

The County would file a NOI with the SWRCB 30 days prior to the start of construction for coverage under the state-wide NPDES permit for construction-related discharges. The contractor would prepare a SWPPP that sets forth the BMPs that would be implemented on site. Implementation of the SWPPP within the project site is monitored through site inspections by the County Resident Engineer and County Environmental Compliance Inspectors. Upon completion of all work and the satisfactory stabilization of all disturbed soil area, a Notice of Termination of Construction must be sent to the SWRCB via their SMARTS website. The SWPPP would be required to meet or exceed measures required by the Construction General Permit. As a result, construction of the proposed project would result in less than significant impacts related to water quality standards.

The nearest receiving body of water to the project site is the Whitewater River which flows to the Salton Sea (located approximately 15 miles southeast of the project area). The Whitewater River is included in the most recent CWA Section 303(d) List of impaired water bodies. In 2015 the SWRCB established a statewide water quality objective for trash and a prohibition of trash discharge to surface waters of the State. The County of Riverside determined that it would comply through the installation, operation, and maintenance of Full Capture Systems for all storm drains that capture runoff from High Priority Land Uses within its jurisdiction. This is achieved through preparation of a SWPPP that sets forth the BMPs that would be implemented on site.

The existing area of impervious surface within the project limits is approximately 4.9 acres, whereas the area of impervious surface after project improvements is estimated to be approximately 6.4 acres. Therefore, the proposed project is anticipated to result in a total increase of approximately 1.5 acres of net new impervious surface as compared to existing conditions. Although the rate and quantity of runoff would change due to the increase in the amount of impervious surface area, the project would have a low potential to impact surface water quality. Implementation of Mitigation Measure WAT-1 would ensure that the proposed project would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality. Therefore, impacts would be less than significant with mitigation incorporated.

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

No Impact. Following construction, the amount of impervious surface would increase by approximately 20 percent within the project area as a result of the proposed improvements. The addition of paved surfaces (roadway and sidewalk) associated with the project would not substantially decrease groundwater recharge in the area due to the amount of new impervious area that would be constructed relative to the existing impervious roadway. Groundwater is estimated to occur at a depth of approximately 37 feet below ground surface in the project area (Michael Baker International 2018c). The proposed project would not involve the direct withdrawal of groundwater. The proposed project would involve improvements to an existing roadway and would not substantially decrease groundwater supplies or substantially interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin. No impact would occur, and no mitigation is required.

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 off-site?

Less Than Significant Impact. The proposed project would not substantially alter the existing drainage patterns of the site through the alteration of the course of a stream or river, and would not result in substantial erosion or siltation on- or off-site. As discussed above in Checklist Response 3.10.2 (a), the

proposed project would result in a minimal increase in stormwater flows in the project area. Although the rate and quantity of runoff would change due to the increase in the amount of impervious surface area, the project would have a low potential to impact surface water with incorporation of the above-described post-construction BMPs. However, the relatively minor increase in stormwater runoff is not significant to cause an increase in downstream erosion rates. The project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in a substantial erosion or siltation on- or off-site. A less than significant impact would occur in this regard, and no mitigation is required.

ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Less Than Significant Impact. The project consists of roadway widening and would not substantially alter the existing on-site drainage patterns or the course of any stream or river. Similar to existing conditions, and following completion of project construction, the project site would consist primarily of impervious surfaces. The anticipated changes to the rate or amount of surface runoff resulting from the project would be captured in the existing storm water conveyance facilities, which would be modified as needed to accommodate the proposed improvements, and would not result in on- or off-site flooding. Therefore, a less than significant impact would occur in this regard and no mitigation is required.

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?

Less Than Significant Impact. The proposed project would not substantially alter the amount of runoff from the site. The anticipated changes to the rate or amount of surface runoff resulting from the proposed project would be captured in existing storm water conveyance facilities and would not exceed the capacity of existing or planned storm water drainage systems. A project SWPPP would be required to address sediment control during project-related construction activities. Also, and as stated above in Checklist Response 3.10.2 (a), feasible post-construction BMPs could include: minimizing road widths, installing full capture trash devices in catch basins, drainage facility inspection and maintenance, MS4 stenciling at inlets, and street sweeping. Incorporation of feasible project-related construction BMPs and post-construction BMPs would reduce impacts to less than significant and no mitigation is required.

iv) Impede or redirect flood flows?

No Impact. According to the Coachella General Plan EIR (Figure 4.7-2), the project site is not located in a 100-year floodplain and will not place housing or other structures in an area that would impede or redirect flows (City of Coachella 2014). According to Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA), the site is located in Zone X, which designates areas located within "Moderate" flood hazard zones (labeled Zone B or Zone X) and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood (FEMA 2018). The project is not located within a FEMA designated 100-year floodplain and would not substantially alter the existing drainage pattern of the site or area such that the project would impede or redirect flood flows. No impact would occur and no mitigation is required.

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

Less Than Significant Impact. There are no water bodies in proximity to the project site that would result in hazards from a seiche or tsunami. Furthermore, there are no open areas in the project area that could be the source of mudflow that would affect the project site. As discussed in Checklist Response 3.10.2 (a) above, with implementation of project construction and post-construction BMPs, the project would have a low potential to impact surface and groundwater quality. The anticipated changes to the rate

or amount of surface runoff resulting from the project would be captured in the existing storm water conveyance facilities, which would be modified as needed to accommodate the proposed improvements; therefore, the risk of pollutant release due to project inundation would be less than significant.

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

No Impact. As discussed above, the project is located within the jurisdiction of the Colorado River RWQCB Region 7 and located within Western Coachella Valley, within the Whitewater River Watershed region. The project would comply with the Section 402 of the CWA, Adopted Order 2009-0009-DWQ Construction General Permit (as amended by 2012-006-DWQ; NPDES No. CAS000002), the California Porter-Cologne Water Quality Protection Act, as amended 2016, and the municipal separate storm sewer system (MS4s) in the Whitewater River Basin, permitted under NPDES Permit NO. CAS617002. This permit requires standard design and post-construction BMPs to be incorporated into roadway projects. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.10.3 Mitigation Measures

WAT-1 The project will require coverage under the Construction General Permit 2009-0009-DWQ NPDES CAS No. CAS 000002 prior to any ground disturbance activities. The Contractor's SWPPP shall describe the Contractor's plan for managing run-on and runoff during each construction phase. The SWPPP shall describe the BMPs that will be implemented to control erosion, sediment, tracking, construction materials, construction wastes, and non-storm water flows. The SWPPP shall describe installation, operation, inspection, maintenance, and monitoring activities that will be implemented for compliance with the CGP and all applicable federal, state, and local laws, ordinances, statutes, rule and regulations related to the protection of water quality. The project site must be fully stabilized using a combination of native hydroseed mix and/or stabilizing tackifier prior to filing the Notice of Termination.

3.11 Land Use and Planning

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.11.1 *Affected Environment*

The project site is located in the City of Coachella, the City of Indio, and the unincorporated County of Riverside. City of Coachella General Plan Map designates land use in the project boundary as Low Density Residential and General Commercial (GC), including the land that is currently under development and adjacent to and south of the project site. The *City of Indio General Plan Land Use Diagram*, dated May 2007 designates land uses in the project area as High Density Residential and Community Commercial (Indio 2007) and the County of Riverside designates land use in unincorporated Riverside County to the north of the project site as Very High Density Residential (County of Riverside 2017).

The project site is situated within developing areas of the City of Coachella, the City of Indio, and the County, adjacent to and west of Indio Boulevard, west of SR-86, and south of I-10. The roadway is surrounded by single-family residential, commercial, retail/restaurant, institutional uses, and vacant land.

3.11.2 *Impact Assessment*

Would the Project:

a) Physically divide an established community?

No Impact. The proposed project involves widening Avenue 48, an existing roadway. Implementation of the proposed project would not diminish access to adjacent properties, nor would the project physically divide an established community. Therefore, no impact would occur and no mitigation is required.

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?

No Impact. The project would relieve traffic congestion, increase mobility, and accommodate existing traffic conditions in the area, and the proposed improvements (e.g., roadway cross-section) are consistent with the City of Coachella's and the City of Indio's General Plans and the County of Riverside's General Plan Circulation Element. More specifically, the proposed project, as designed, is consistent with the following roadway classifications per the General Plan for each respective jurisdiction (i.e., County of Riverside and cities of Coachella and Indio):

- County of Riverside: Arterial Highway
- City of Coachella: Major Arterial
- City of Indio: Augmented Major (B)

Therefore, and given the above, no impact would occur and no mitigation is required.

3.11.3 Mitigation Measures

No mitigation measures are proposed.

3.12 Mineral Resources

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.12.1 Affected Environment

The State Mining and Reclamation Act of 1975 identifies and protects California's mineral resources. The State of California Geological Survey Mineral Resources project provides the most recent and accurate information about mineral resources. Based on an assessment of local and regional mineral deposits, the state of California assigns different Mineral Resource Zones (MRZs). These include:

- **MRZ 1:** Areas where adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ 2:** Areas where significant mineral deposits are present or likely to be present and development should be controlled.
- **MRZ 3:** Areas where the significance of mineral deposits cannot be determined from the available data.

3.12.2 Impact Assessment

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?

No Impact. The City of Coachella General Plan Draft EIR Figure 4.5-9, Mineral Resource Zones in Planning Area, indicates that the project site is located in an area designated as MRZ-1 (City of Coachella 2017a). The Western Coachella Valley Area Plan does not show the project site as being located within a "Mineral Resources" area (County of Riverside 2017). As stated above, the MRZ-1 zone designates areas where adequate information indicates that no significant mineral deposits are present or likely to be present. The proposed project involves the widening of an existing roadway situated within a developed area. Therefore, no impacts to mineral resources would occur and no mitigation is required.

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. There are no mineral resource recovery sites identified on or adjacent to the project area. The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site. No impact would occur, and no mitigation is required.

3.12.3 Mitigation Measures

No mitigation measures are proposed.

3.13 Noise

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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 the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Information in this section is based on the *Avenue 48 Widening Project – Noise Study Report* prepared by Michael Baker International (2018d).

3.13.1 Regulatory Environment

California Environmental Quality Act

The *Noise Study Report* was prepared in conformance with CEQA (Public Resources Code 21000-21177) and the CEQA Guidelines (CCR, Title 14, Division 6, Chapter 3, Sections 15000-15387). Under CEQA, the baseline noise level is compared to the build noise level. The assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

City of Coachella General Plan Update 2035

The California Government Code requires that a noise element be included in the general plan of each County and City in the state. The *City of Coachella General Plan Update 2035* (City General Plan) Noise Element examines noise sources in the City with a view toward identifying and appraising the potential for noise conflicts and problems and identifies ways to reduce existing and potential noise impacts. The Noise Element provides objectives, policies, and programs to achieve and maintain noise levels compatible with various types of land uses. The Noise Element includes the following goals and policies applicable to the proposed project.

Goal 1 - Land Use Planning and Design: A community where noise compatibility between differing types of land uses is ensured through land use planning and design strategies.

Policies:

1.1 Noise Compatibility. Use the City's Noise and Land Use Compatibility (refer to Table 3-13, *City of Coachella Noise and Land Use Compatibility)* as a guide for planning and development decisions.

1.2 Noise Analysis and Mitigation. Require projects involving new development or modifications to existing development to implement mitigation measures, where necessary, to reduce noise levels to at least the normally compatible range shown in Table 3-13. Mitigation measures should focus on architectural features, building design and construction, rather than site design features such as excessive setbacks, berms and sound walls, to maintain compatibility with adjacent and surrounding uses.

1.3 Mixed Use. Require mixed-use structures and areas be designed to prevent transfer of noise from commercial uses to residential uses, and ensure a 45 A-weighted decibels (dBA) community noise equivalent level (CNEL) level or lower for all interior living spaces.

1.4 County and Regional Plans. Periodically review county and regional plans for transportation facilities and airport operation, to identify and mitigate the potential impact of noise on future development.

1.5 Airport Land Use Planning. Comply with all applicable policies contained in the Riverside County General Plan Noise Element relating to airport noise, including those policies requiring compliance with the airport land use noise compatibility criteria contained in the airport land use compatibility plan for Jacqueline Cochran Regional Airport; and those policies prohibiting new residential land uses, except construction of single-family dwellings on legal residential lots of record, within the 60 dB CNEL contour of this airport.

1.6 Land Use and Community Design. Except in cases where noise levels are in the clearly incompatible range as shown in Table 3-13, prioritize the building design and character policies in the Land Use and Community Design Element over those in the Noise Element to ensure that new development meets the design vision of the City.

Goal 2 - Stationary Source Noise: A community where excessive noise from stationary sources is minimized.

Policies:

2.1 Noise Ordinance. Minimize noise conflicts between neighboring properties through enforcement of applicable regulations such as the City's noise ordinance.

2.2 Noise Control. Minimize stationary noise impacts on sensitive receptors and noise emanating from construction activities, private developments/residences, landscaping activities, night clubs and bars and special events.

2.3 Entertainment Uses. Require entertainment, restaurants, and bars engage in responsible management and operation to control activities of their patrons on-site, within reasonable and legally justifiable proximity to minimize noise impacts on adjacent residences and other noise-sensitive receptors, require mitigation, as needed, for development of entertainment uses near noise-sensitive receptors.

2.4 Industrial Uses. Require industrial uses engage in responsible operational practices that minimize noise impacts on adjacent residences and other noise-sensitive receptors require mitigation as needed for development of industrial uses near noise sensitive receptors.

TABLE 3-13 CITY OF COACHELLA NOISE AND LAND USE COMPATIBILITY

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (L_{dn} or CNEL, dBA)			
	Clearly Compatible	Normally Compatible	Normally Incompatible	Clearly Incompatible
Residential - Single Family Residential, Duplex, Multiple Family	50 – 60	60 – 70	70 – 75	75 – 85
Residential - Mobile Homes	50 – 60	60 – 65	65 – 75	75 – 85
Commercial - Hotel, Motel, Transient Lodging	50 – 60	60 – 70	70 – 80	80 – 85
Commercial - Retail, Bank Restaurant, Movie Theater	50 – 70	70 – 80	80 – 85	-
Commercial Industrial – Office Building, Research and Development, Professional Offices, City Office Building	50 - 65	65 – 75	75 - 80	80 – 85
Commercial Institutional – Amphitheater, Concert Hall, Auditorium, Meeting Hall	-	50 – 60	60 - 70	70 – 85
Commercial – Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	50 – 65	65 - 75	-	75 – 85
Commercial Industrial, Institutional – Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	50 – 70	70 - 85	-	-
Institutional – Hospital, Church, Library, School Classroom	50 – 60	60 – 65	65 – 75	75 - 85
Open Space - Parks	50 – 65	65 – 70	70 – 75	75 - 85
Open Space – Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	50 – 70	70 – 75	75 – 85	-
Agriculture	50-85	-	-	-

Clearly Compatible – Specified land use is satisfactory, based upon the assumption that any building is of normal conventional construction, without any special noise insulation requirements.
Normally Compatible – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, would normally suffice.
Normally Incompatible – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Incompatible – New construction or development should generally not be undertaken.
* Construction of new residential uses would not be allowed within the 65 dBA CNEL contour for airport use.

Source: Michael Baker International 2018d.

Goal 3 - Mobile Source Noise: A community where excessive noise from mobile sources is minimized.

Policies:

3.1 Roadway Noise. Where roadway noise exceeds the normally compatible range shown in Table 3-20 of the City's Land Use/Noise Compatibility Matrix, implement policies listed under Goal 1 to reduce the impacts of roadway noise on noise-sensitive receptors.

3.2 Traffic Calming. Where roadway noise exceeds the normally compatible range shown in Table 3-20 of the City's Land Use/Noise Compatibility Matrix, consider the implementation of traffic calming measures such as reduced speed limits or roadway design features to reduce noise levels through reduced vehicle speeds and/or diversion of vehicle traffic.

3.3 Railway Noise. Ensure noise from rail lines is taken into account during the land use planning and site development processes.

City of Coachella Municipal Code

Title 7, *Noise Control* of the *Coachella Municipal Code* (City Municipal Code) determines certain noise levels that are detrimental to the public health, safety and welfare and are contrary to the public interest. The provisions control unnecessary, excessive and/or annoying noise in the City and prohibit such noise generated by the sources specified in this chapter. The goal of the City is to minimize noise levels and mitigate the effects of noise to provide a safe and healthy living environment.

Chapter 7.04.030 *Sound Level Limits as Related to Fixed Noise Sources* identifies the provisions for exterior noise standards by land use category; refer to Table 3-14.

TABLE 3-14 CITY OF COACHELLA EXTERIOR NOISE STANDARDS

LAND USE CATEGORY	UNDERLYING ZONE	TIME PERIOD	NOISE LEVEL
Residential	All zones	Day (6:00 a.m. to 10:00 p.m.) Night (10:00 p.m. to 6:00 a.m.)	55 dBA 45 dBA
Commercial	All zones	Day (6:00 a.m. to 10:00 p.m.) Night (10:00 p.m. to 6:00 a.m.)	65 dBA 55 dBA

Source: Michael Baker International 2018d.

A. *Regardless of whether an objective measurement by sound level meter is involved, it shall be unlawful for any person to make, continue, or cause to be made or continued, within the city limits any disturbing excessive or offensive noise or vibration which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area or that is plainly audible at a distance greater than 50 feet from the sources point for any purpose. The following ten-minute average sound level limits, unless otherwise specifically indicated, shall apply as indicated in the above Table 3-14 as it relates to a fixed noise source or leaf blowers pursuant to Section 7.04.075.*

B. *If the measured ambient noise level exceeds the applicable limit as noted in the table in subsection (A) of this section, the allowable average sound level shall be the ambient noise level. The ambient noise level shall be measured when the alleged noise violation sources are not operating.*

C. *The sound level limit between two zoning districts shall be measured at the higher allowable district.*

Chapter 7.04.070, *Construction Activities* indicates that no person shall perform, nor shall any person be employed, nor shall any person cause any other person to be employed to work for which a building

permit is required by the city in any work of construction, erection, demolition, alteration, repair, addition to or improvement of any building, structure, road or improvement to realty except between the hours as set forth as follows:

October 1st through April 30th

Monday - Friday: 6:00 a.m. to 5:30 p.m.
Saturday: 8:00 a.m. to 5:00 p.m.
Sunday: 8:00 a.m. to 5:00 p.m.
Holidays: 8:00 a.m. to 5:00 p.m.

May 1st through September 30th

Monday - Friday: 5:00 a.m. to 7:00 p.m.
Saturday: 8:00 a.m. to 5:00 p.m.
Sunday: 8:00 a.m. to 5:00 p.m.
Holidays: 8:00 a.m. to 5:00 p.m.

Emergency work and/or unusual conditions may cause work to be permitted with the consent of the city manager, or his or her designee, upon recommendation of the building director or the city engineer.

City of Indio 2020 General Plan Noise Element

The Public Health and Safety Element 16 of the City's 2020 General Plan includes the following goal and policies related to noise within the City's planning area.

Goal NOI-1: Protect those living, working, and visiting the community from exposure to excessive noise.

Policy NOI-1.1 Prohibit the development of new commercial, industrial, or other noise generating land uses adjacent to existing residential uses and sensitive noise receptors such as schools, health care facilities, libraries, and churches if noise levels are to exceed 65 dBA CNEL.

Policy NOI-1.2 Ensure that excessive noise levels do not interfere with sleep through the implementation of land use requirements.

Policy NOI-1.3 Ensure that exterior noise levels for dwellings in residential areas do not exceed exterior noise levels of 65 dBA CNEL and interior noise levels of 45 dBA CNEL.

The City established goals and policies regarding land use compatibility with noise in the Public Health and Safety Element of the *Indio General Plan*. The goal of the noise standards is maintaining a healthy noise environment which complements the City's residential and resort character, and the mix of land uses provided in the City. Table 3-15 provides a land use compatibility matrix for community noise from the *City of Indio General Plan* that was developed by the California Office of Noise Control. Table 3-15 allows noise concerns to be incorporated in land use planning to prevent future noise and land use incompatibilities in the City.

Based upon the exterior noise exposure level, Table 3-15 identifies various land use categories as "normally acceptable," "conditionally acceptable," or "normally unacceptable" for development. It also identifies noise exposure levels where new construction or development should not be undertaken as "clearly unacceptable." A "normally acceptable" designation indicates that conventional construction can occur with no special noise reduction requirements. A "conditionally acceptable" designation implies that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each proposed land use is made and needed noise insulation features are incorporated in the design. It also identifies noise exposure levels where new construction or development should not be undertaken, as "clearly unacceptable."

For noise-sensitive low-density single-family residential land uses, exterior noise levels of 60 dBA CNEL and below are considered "normally acceptable" by the City. The Building Department maintains *Uniform Building Code* standards which ensure that interior noise levels meet or exceed City standards which specify a maximum interior noise exposure of 45 dBA CNEL for residential structures. Exterior noise level standards apply to outdoor areas which have regular human use and in which a lowered noise level would be beneficial. Outdoor noise environments are generally limited to the rear yard of single-family homes, multifamily patios and balconies (with a depth of six feet or more) and common recreational areas.

TABLE 3-15 CITY OF INDIO NOISE AND LAND USE COMPATIBILITY

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (L_{dn} or CNEL, dBA)			
	Clearly Compatible	Normally Compatible	Normally Incompatible	Clearly Incompatible
Residential - Single Family Residential, Duplex, Multiple Family	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Low Density Single Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multi Family	50 – 62.5	60 – 70	70 – 75	75 – 85
Transient Lodging - Motels, Hotels	50 – 62.5	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	-	50 – 70	65 – 85	-
Sports Arena, Outdoor Spectator Sports	-	50 – 75	70 – 85	-
Playgrounds, Neighborhood Parks	50 – 70	-	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 75	-	70 – 80	80 – 85
Office Buildings, Business, Commercial, and Professional	50 – 75	67.5 – 77.5	-	75 – 85
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	-	75 – 85

Source: City of Indio, *Indio General Plan 2020, Public Health and Safety Element*, 1993.
Clearly Compatible – Specified land use is satisfactory, based upon the assumption that any building is of normal conventional construction, without any special noise insulation requirements.
Normally Compatible – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, would normally suffice.
Normally Incompatible – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Incompatible – New construction or development should generally not be undertaken.
* Construction of new residential uses would not be allowed within the 65 dBA CNEL contour for airport use.

Source: Michael Baker International 2018d.

City of Indio Noise Ordinance

The Indio Noise Ordinance 17, codified in Chapter 95C of the *Indio Municipal Code*, defines standards and general administrative procedures to control and abate unnecessary, excessive, and annoying noise and vibration. The Indio Noise Ordinance defines maximum permissible sound levels for sensitive and nonresidential uses within the City. This ordinance recognizes that excessive noise and vibration within the City is a condition that is detrimental to quality of life. Motor vehicle traffic noise is exempt from the ordinance.

County of Riverside General Plan

The Riverside County General Plan Noise Element (County Noise Element) has established noise-level performance standards for projects affected by non-transportation sources and transportation sources. Noise is generally characterized as an equivalent continuous sound level (Leq) averaged over time, day-night average sound level (Ldn), or CNEL.

Appendix I of the County Noise Element includes the *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures Memorandum* (Traffic Noise Impact Memo). The Traffic Noise Impact Memo sets maximum thresholds for both interior noise levels in residential dwellings and exterior noise levels with respect to transportation projects. The interior noise levels in residential dwellings shall not exceed 45 Ldn/CNEL. The exterior noise level shall not exceed 65 Ldn/CNEL per the County Noise Element. The Noise Study Report compared existing and future ambient noise levels with thresholds established in the Traffic Noise Impact Memo to determine the potential for significant noise impacts.

Figure 3-8 depicts the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

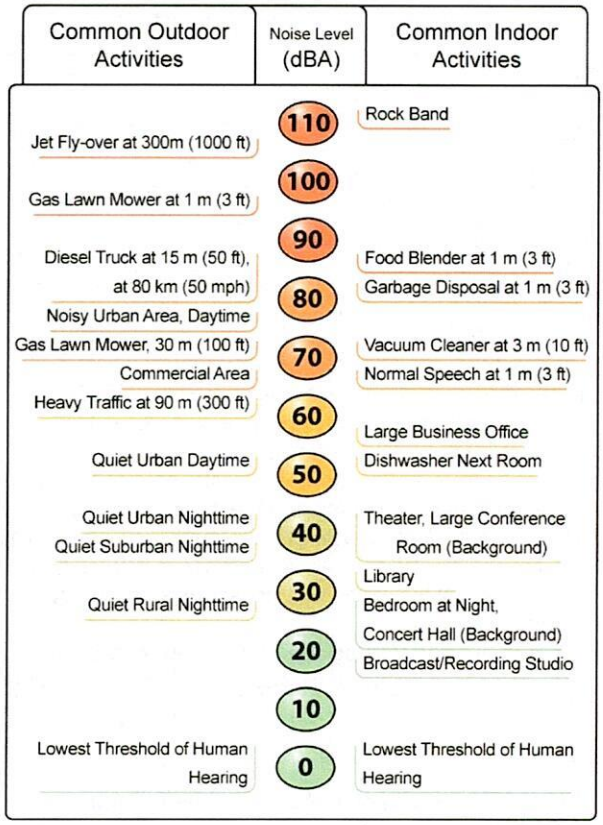

FIGURE 3-8 NOISE LEVELS OF COMMON ACTIVITIES

3.13.2 Study Methods and Procedures

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Although all land uses are evaluated in this analysis, the focus is on locations of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences.

Short-term measurement locations were selected to represent noise-sensitive land uses within the project area. Several other non-measurement locations were selected as modeling locations. A field noise study was conducted in accordance with recommended procedures in the Traffic Noise Impact Memo. The following is a summary of the procedures used to collect sound level data.

Field Measurement Procedures

Short-term noise measurements were taken at outdoor frequent human use areas at sensitive receivers within the proposed project area. Field measurements were taken at these locations to help determine proper shielding and background noise levels. All field measurements were 10 minutes in duration and noise levels are in terms of A-weighted decibel equivalent sound level. The following is a brief description of the measurement procedures utilized during field monitoring.

Short-Term Measurements

Short-term monitoring was conducted at three locations on August 30, 2017, using a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. The measurements were taken over a 10-minute period. The short-term measurement locations are identified in Figure 3-9.

During the short-term measurements, field staff attended the noise meter. Minute-to-minute Leq values collected during the measurement period (10 minutes in duration) were logged by the sound level meter. Dominant noise sources that were not traffic-based were observed and noted during the measurements.

Temperature, wind speed, and humidity were noted during the short-term monitoring. During the short-term measurements, winds were gentle and speeds typically ranged from 0 to 5 mph. Temperatures ranged from 96°F to 102°F, with the barometric pressure typically 29.71 inches. The field note data sheets are provided in Appendix D, Supplemental Noise Data.

Traffic Noise Level Prediction Methods

Traffic noise levels were predicted using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (TNM 2.5). TNM 2.5 is a computer model based on two FHWA reports: FHWA-PD-96-009 and FHWA-PD-96-010. Key inputs to the traffic noise model were the locations of roadways, shielding features (e.g., topography and buildings), noise barriers, ground type, and receptors. Three-dimensional representations of these inputs were developed using CAD drawings, aerials, and topographic contours.

Traffic noise was evaluated under existing conditions, design year no-project conditions, and design year conditions with the project. The loudest hour is generally characterized by free-flowing traffic at the highway design speed (i.e., LOS C or better). Vehicle classification percentages, and traffic speeds for existing and future design-year conditions along Avenue 48, Van Buren Street, and Dillon Road were obtained from the Traffic Noise Impact Memo for input into the traffic noise model. Loudest-hour ADT volumes (LOS C) were obtained from Figure C-3 Link/Volume Capacity/Level of Service Riverside County Roadways (revised March 2001) of the County General Plan. Tables A-1 and A-2 in Appendix D

summarize the traffic volumes and assumptions used for modeling existing and future conditions with and without the proposed project.

Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receptor locations where predicted design-year noise levels are at least 12 decibels (dB) greater than existing noise levels, or where predicted design year noise levels approach or exceed the noise abatement criteria for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonableness and feasibility as required by 23 CFR §772 and the Protocol.

According to the Protocol, abatement measures are considered acoustically feasible if a minimum noise reduction of 5.0 dB at impacted receptor locations is predicted with implementation of the abatement measures. In addition, barriers should be designed to intercept the line-of-sight from the exhaust stack of a truck to the first tier of receptors, as required by the Highway Design Manual, Chapter 1100. Furthermore, in accordance with the Protocol, Caltrans' acoustical design goal is that a barrier must provide at least 7.0 dB of noise reduction at one or more benefited receivers. This design goal applies to any receiver and is not limited to impacted receivers. Other factors that affect feasibility include topography, access requirements for driveways and ramps, presence of local cross streets, utility conflicts, other noise sources in the area, and safety considerations. The overall reasonableness of noise abatement is determined by considering factors such as cost; absolute predicted noise levels; predicted future increase in noise levels; expected noise abatement benefits; build date of surrounding residential development along the highway; environmental impacts of abatement construction; opinions of affected residents; input from the public and local agencies; and social, legal, and technological factors.

The Protocol defines the procedure for assessing reasonableness of noise barriers from a cost perspective. A cost-per-residence allowance is calculated for each benefited residence (i.e., residences that receive at least 5.0 dB of noise reduction from a noise barrier). The 2018 base allowance is $95,000 per benefited residence. Additional allowance dollars are added to the base allowance based on absolute noise levels, the increase in noise levels resulting from the project, achievable noise reduction, and the date of building construction in the area. Total allowances are calculated by multiplying the cost-per-residence by the number of benefited residences. If the total allowance for all evaluated noise barriers is more than 50 percent of the estimated construction cost, the allowance per residence is modified to a reduced value.

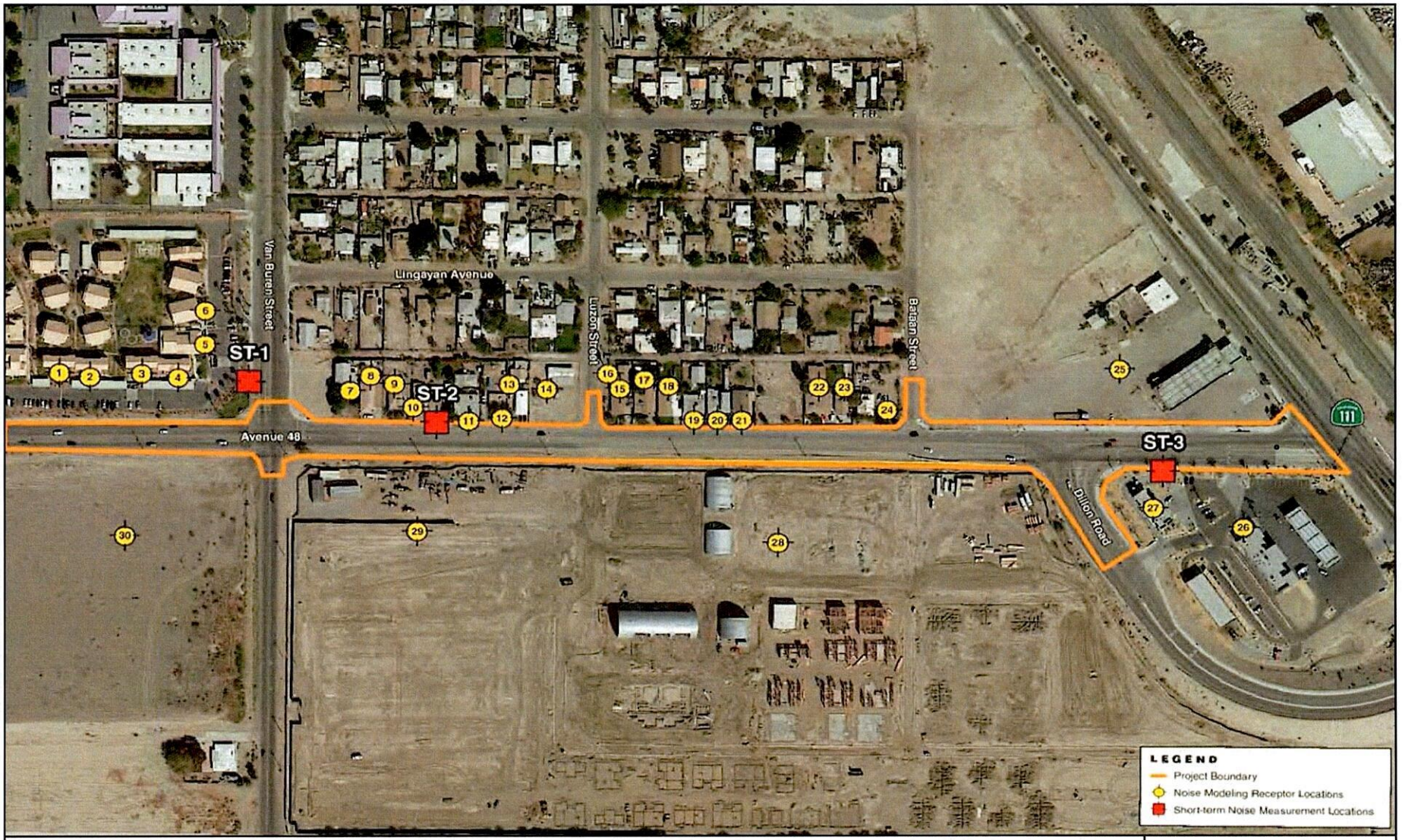

FIGURE 3-9

NOISE MEASUREMENT AND MODELING LOCATIONS

COUNTY OF RIVERSIDE

AVENUE 48 WIDENING PROJECT

Source: Michael Baker International, 2018

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3.13.3 *Affected Environment*

Existing Land Uses

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Single- and multi-family residential uses are located to north of Avenue 48. Other land uses in the project vicinity include commercial and vacant land uses.

Noise Measurement Results

The existing noise environment of the project area was characterized by conducting short-term noise level measurements at representative noise-sensitive receiver locations.

Short-Term Monitoring

In order to quantify existing ambient mobile noise levels in the project area, three noise measurements were conducted on August 30, 2017; refer to Table 3-16, Summary of Short-Term Measurements. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. Ten-minute measurements were taken between 9:15 a.m. and 10:10 a.m., at each site during the day. Short-term (Leq) measurements are considered representative of the noise levels in the project vicinity.

TABLE 3-16 SUMMARY OF SHORT-TERM MEASUREMENTS

SITE NO.	LOCATION	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	PEAK (dBA)	TIME
1	On grass in front of 83880 Avenue 48, Indio	65.5	50.6	83.8	98.2	9:56 a.m.
2	On the road in front of 84056 Avenue 48	69.1	50.1	86.2	104.0	9:39 a.m.
3	On the sidewalk in front of 84195 Avenue 48	71.3	52.1	95.1	116.6	9:15 a.m.

Source: Michael Baker International 2018d.

Meteorological conditions were sunny, warm temperatures, with light wind speeds (less than 5.0 mph), and low humidity. Measured noise levels during the daytime measurements ranged from 65.5 to 71.3 dBA Leq. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the ANSI for Type I (precision) sound level meters. The results of the field measurements are included in Noise Study Report.

Existing Noise Levels

The primary existing noise sources in the project area are transportation facilities. Traffic traveling on Avenue 48 is the main source of traffic noise in the project vicinity. The FHWA TNM 2.5 was used to evaluate traffic-related noise conditions in the vicinity of the project site. Since County of Riverside noise standards are expressed in L_{dn}/CNEL, TNM 2.5 was used to estimate noise levels expressed in dBA L_{den}, the level of noise expressed as a 24-hour average (also known as CNEL). LOS C traffic volumes were taken from Figure C-3 Link/Volume Capacity/Level of Service Riverside County Roadways (revised March 2001) of the County General Plan.

Table 3-17, Existing Traffic Noise Levels, shows the existing exterior and interior noise levels in the project area. Table 3-17 also lists the location and type of development for each modeled receiver location. The ambient noise levels measured were used to establish the existing noise level at many locations within the project area. As shown in Table 3-17, no modeled receptors in the project vicinity are currently exposed to noise levels exceeding the City of Coachella's, City of Indio's, and/or County of Riverside's exterior or interior noise thresholds.

TABLE 3-17 EXISTING TRAFFIC NOISE LEVELS

RECEPTOR NO.	LOCATION/APN	TYPE OF LAND USE	# OF DWELLING UNITS	MODELED EXTERIOR NOISE LEVEL (dBA CNEL)[1]	EXCEED CITY OR COUNTY EXTERIOR NOISE THRESHOLD?	MODELED INTERIOR NOISE LEVEL (dBA CNEL)[1,2]	EXCEED CITY OR COUNTY INTERIOR NOISE THRESHOLD?
1	83880 Avenue 48, Indio, CA 92201	Residential	4	59	*No*[3]	39	*No*[3]
2		Residential	4	59	*No*[3]	39	*No*[3]
3		Residential	4	60	*No*[3]	40	*No*[3]
4		Residential	4	60	*No*[3]	40	*No*[3]
5		Residential	4	59	*No*[3]	39	*No*[3]
6		Residential	4	58	*No*[3]	38	*No*[3]
7	84030 Avenue 48, Indio, CA 92201	Residential	1	62	*No*[4]	42	*No*[4]
8	84038 Avenue 48, Indio CA 92201	Residential	1	58	*No*[4]	38	*No*[4]
9	84056 Avenue 48, Indio CA 92201	Residential	1	57	*No*[4]	37	*No*[4]
10		Residential	1	62	*No*[4]	42	*No*[4]
11	84072 Avenue 48, Indio CA 92201	Residential	1	62	*No*[4]	42	*No*[4]
12	84088 48th Ave, Indio CA 92201	Residential	1	62	*No*[4]	42	*No*[4]
13	84100 Avenue 48, Indio CA 92201	Residential	1	56	*No*[4]	36	*No*[4]
14	47939 Luzon St, Indio CA 92201	Residential	1	56	*No*[4]	36	*No*[4]
15	84138 Avenue 48, Indio CA 92201	Residential	1	56	*No*[4]	36	*No*[4]
16		Residential	1	55	*No*[4]	35	*No*[4]
17	84148 Avenue 48, Indio CA 92201	Residential	1	56	*No*[4]	36	*No*[4]
18	84158 Avenue 48, Indio CA 92201	Residential	1	56	*No*[4]	36	*No*[4]
19	84166 Avenue 48, Indio CA 92201	Residential	1	63	*No*[4]	43	*No*[4]
20	84172 Avenue 48, Indio CA 92201	Residential	1	63	*No*[4]	43	*No*[4]
21	84186 48th Ave, Indio CA 92201	Residential	1	63	*No*[4]	43	*No*[4]
22	84220 48th Ave, Indio CA 92201	Residential	1	56	*No*[4]	36	*No*[4]
23		Residential	1	55	*No*[4]	35	*No*[4]
24	84229 Avenue 48, Indio CA 92201	Residential	1	62	*No*[4]	42	*No*[4]
25	84417 Indio Blvd, Indio CA 92201	Commercial	-	58	*No*[5]	38	*No*[7]
26	48055 Grapefruit Blvd, Coachella CA 92236	Commercial	-	58	*No*[5]	38	*No*[7]

RECEPTOR NO.	LOCATION/APN	TYPE OF LAND USE	# OF DWELLING UNITS	MODELED EXTERIOR NOISE LEVEL (dBA CNEL)[1]	EXCEED CITY OR COUNTY EXTERIOR NOISE THRESHOLD?	MODELED INTERIOR NOISE LEVEL (dBA CNEL)[1,2]	EXCEED CITY OR COUNTY INTERIOR NOISE THRESHOLD?
27	48079 Grapefruit Blvd, Coachella CA 92236	Commercial	-	63	***No***[5]	43	***No***[7]
28	APN 603-220-066	Commercial	-	58	***No***[5]	38	***No***[7]
29	APN 603-220-062	Commercial	-	59	***No***[5]	39	***No***[7]
30	APN 612-230-015	Vacant	-	59	***No***[6]	38	***No***[7]

Notes:

1. The modeled noise levels are based on LOS C traffic volumes provided in *Figure C-3 Link/Volume Capacity/Level of Service Riverside County Roadways* (revised March 2001) of the County General Plan.
2. Assuming that standard residential design (with windows closed) will provide a 20 dBA of attenuation in accordance with the County of Riverside's *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures Memorandum* (January 15, 2004).
3. The exterior noise standard for single- and multi-family residential uses is 60 dBA CNEL, and the interior noise threshold is 45 dBA CNEL in the City of Indio.
4. The County of Riverside exterior noise standard for single- and multi-family residential uses is 60 dBA CNEL, and the interior noise threshold is 45 dBA CNEL.
5. The City of Indio exterior noise standard for commercial retail and industrial uses is 70 dBA CNEL.
6. There is no noise standard for vacant land.
7. There is no interior noise standard for commercial uses or vacant land.

Source: Michael Baker International 2018d.

3.13.4 Impact Assessment

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 the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact With Mitigation. It is difficult to specify noise levels that are generally acceptable to everyone; what is annoying to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels, or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general population.

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 3-18, Construction Equipment Noise, summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels up to 95 dB at a distance of 25 feet, 89 dB at 50 feet, and 83 at 100 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6.0 dB per doubling of distance.

TABLE 3-18 CONSTRUCTION EQUIPMENT NOISE

EQUIPMENT	MAXIMUM NOISE LEVEL (dBA at 25 feet)	MAXIMUM NOISE LEVEL (dBA at 50 feet)	MAXIMUM NOISE LEVEL (dBA at 100 feet)	MAXIMUM NOISE LEVEL (dBA at 600 feet)
Scrapers	95	89	83	67
Bulldozers	91	85	79	63
Heavy Trucks	94	88	82	66
Backhoe	86	80	74	58
Pneumatic Tools	91	85	79	63
Concrete Pump	88	82	76	30

Source: Michael Baker International 2018d.

Sensitive uses closest to the project site include residential uses adjoining the roadway to the north. Additionally, the next closest sensitive receptor, Martin Van Buren Elementary School is located approximately 478 feet north of the roadway. These sensitive uses may be exposed to elevated noise levels during project construction. However, as the project involves the widening of a roadway, construction noise would not be concentrated in one location for extended periods of time. Construction equipment would move in a linear fashion along the project area.

Roadway construction that occurs within or adjacent to the City of Coachella would be required to comply with the construction time limitations within Section 7.40.070 of the Coachella Municipal Code. Pursuant to the City Municipal Code, all construction activities may occur from October 1st through April 30th between the hours of 6:00 a.m. and 5:30 p.m. on week days and between 8:00 a.m. and 5:00 p.m. on weekends and holidays. From May 1st through September 30th, all construction activities may occur between the hours of 5:00 a.m. to 7:00 p.m. on week days and between 8:00 a.m. to 5:00 p.m. on weekends and holidays. Roadway construction that occurs within or adjacent to unincorporated Riverside County would be required to comply with the construction time limitations within Section 2 of Ordinance Number 847 of the Riverside County Code. Pursuant to the County Code, private construction projects located one-quarter of a mile or more from an inhabited dwelling, provided that construction occurs between the hours of 6:00 a.m. and 6:00 p.m. during the months of June through September, and between

the hours of 7:00 a.m. and 6:00 p.m. during the months of October through May are exempt from the county-wide noise regulations. These permitted hours of construction are required in recognition that construction activities undertaken during daytime hours are a typical part of living in an urban environment and do not cause a significant disruption. Implementation of Mitigation Measure NOI-1 would ensure that project construction complies with allowable hours for construction noise and requires construction equipment to be equipped with properly operating and maintained mufflers and other state required noise attenuation devices to further minimize impacts. Therefore, a less than significant noise impact would result from construction activities.

No modeled receptors would be exposed to noise levels exceeding City of Coachella, City of Indio, and/or County of Riverside exterior or interior noise thresholds under Build conditions. The design-year traffic noise modeling results are summarized in Table 3-19, Future Traffic Noise Levels (see Tables B-1 and B-2 in Appendix B of the Noise Study Report for the design-year traffic noise modeling results). As shown in Table 3-19, exterior noise levels would range between 55 dBA CNEL and 63 dBA CNEL, and interior noise level would range between 35 dBA CNEL and 43 dBA CNEL under the Future No Build scenario. As also shown in Table 3-19, no modeled receptors would be exposed to noise levels exceeding the County of Riverside 65 dBA CNEL exterior noise level threshold, and/or the 45 dBA CNEL interior noise level threshold under No Build conditions.

Exterior noise levels under the Build Alternative (i.e., the proposed project) would range between 58 dBA CNEL and 65 dBA CNEL, and interior noise levels under the Build Alternative would range between 38 dBA CNEL and 45 dBA CNEL. As shown in Table 3-19, no modeled receptors would be exposed to noise levels exceeding City of Coachella, City of Indio, and/or County of Riverside exterior or interior noise thresholds under Build conditions.

The greatest traffic noise increase (3.0 dBA) with project implementation would occur at receptors 16 (residence), 28 (commercial use), and 29 (commercial use) when comparing the Future Build and Future No Build scenarios. However, noise levels would not exceed the City of Coachella's, City of Indio's, and/or County of Riverside's exterior and interior noise thresholds with project implementation. Therefore, a less than significant impact would occur and no mitigation is required.

Upon project completion, noise in the project area would not significantly increase. The project involves widening Avenue 48 from Van Buren Street eastward to Dillon Road. The proposed project does not include any stationary noise sources and would not generate any stationary source noise impacts. Therefore, the project would not result in 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.

TABLE 3-19 FUTURE TRAFFIC NOISE LEVELS

RECEPTOR NO.	LOCATION/APN	TYPE OF LAND USE	# OF DWELLING UNITS	FUTURE NO BUILD[1]		FUTURE BUILD			
				Predicted Exterior Noise Level (dBA CNEL)[1,2]	Predicted Interior Noise Level (dBA CNEL)[1,2,3]	Predicted Exterior Noise Level (dBA CNEL)[2]	Exceed City or County Exterior Noise Threshold?	Predicted Interior Noise Level (dBA CNEL)[2,3]	Exceed City or County Interior Noise Threshold?
1	83880 Avenue 48, Indio, CA 92201	Residential	4	59	39	60	No[4]	40	No[4]
2		Residential	4	59	39	60	No[4]	40	No[4]
3		Residential	4	60	40	61	No[4]	41	No[4]
4		Residential	4	60	40	60	No[4]	40	No[4]
5		Residential	4	59	39	59	No[4]	39	No[4]
6		Residential	4	58	38	58	No[4]	38	No[4]
7	84030 Avenue 48, Indio, CA 92201	Residential	1	62	42	63	No[5]	43	No[5]
8	84038 Avenue 48, Indio CA 92201	Residential	1	58	38	59	No[5]	39	No[5]
9	84056 Avenue 48, Indio CA 92201	Residential	1	57	37	59	No[5]	39	No[5]
10		Residential	1	62	42	64	No[5]	44	No[5]
11	84072 Avenue 48, Indio CA 92201	Residential	1	62	42	63	No[5]	43	No[5]
12	84088 Avenue 48, Indio CA 92201	Residential	1	62	42	63	No[5]	43	No[5]
13	84100 Avenue 48, Indio CA 92201	Residential	1	56	36	58	No[5]	38	No[5]
14	47939 Luzon St, Indio CA 92201	Residential	1	56	36	58	No[5]	38	No[5]
15	84138 Avenue 48, Indio CA 92201	Residential	1	56	36	58	No[5]	38	No[5]
16		Residential	1	55	35	58	No[5]	38	No[5]
17	84148 Avenue 48, Indio CA 92201	Residential	1	56	36	58	No[5]	38	No[5]
18	84158 Avenue 48, Indio CA 92201	Residential	1	56	36	58	No[5]	38	No[5]
19	84166 Avenue 48, Indio CA 92201	Residential	1	63	43	65	No[5]	45	No[5]

RECEPTOR NO.	LOCATION/APN	TYPE OF LAND USE	# OF DWELLING UNITS	FUTURE NO BUILD[1]		FUTURE BUILD			
				Predicted Exterior Noise Level (dBA CNEL)[1,2]	Predicted Interior Noise Level (dBA CNEL)[1,2,3]	Predicted Exterior Noise Level (dBA CNEL)[2]	Exceed City or County Exterior Noise Threshold?	Predicted Interior Noise Level (dBA CNEL)[2,3]	Exceed City or County Interior Noise Threshold?
20	84172 Avenue 48, Indio CA 92201	Residential	1	63	43	65	***No***[5]	45	***No***[5]
21	84186 48th Ave, Indio CA 92201	Residential	1	63	43	64	***No***[5]	44	***No***[5]
22	84220 48th Ave, Indio CA 92201	Residential	1	56	36	59	***No***[5]	39	***No***[5]
23		Residential	1	55	35	58	***No***[5]	38	***No***[5]
24	84229 Avenue 48, Indio CA 92201	Residential	1	62	42	64	***No***[5]	44	***No***[5]
25	84417 Indio Blvd, Indio CA 92201	Commercial	-	58	38	59	***No***[6]	39	***No***[8]
26	48055 Grapefruit Blvd, Coachella CA 92236	Commercial	-	58	38	60	***No***[6]	40	***No***[8]
27	48079 Grapefruit Blvd, Coachella CA 92236	Commercial	-	63			***No***[6]	44	***No***[8]
28	APN 603-220-066	Commercial	-	58			***No***[6]	41	***No***[8]
29	APN 603-220-062	Commercial	-	59			***No***[6]	42	***No***[8]
30	APN 612-230-015	Vacant	-	58			***No***[7]	39	***No***[8]

Notes:
1. Since no improvements would be made to Avenue 48 under the Future No Build scenario, the traffic volumes and predicted noise levels for the Future No Build scenario would be the same as the existing modeled noise levels shown in Table 6 (Existing Traffic Noise Levels).
2. The modeled noise levels are based on LOS C traffic volumes provided in *Figure C-3 Link/Volume Capacity/Level of Service Riverside County Roadways* (revised March 2001) of the County General Plan.
3. Assuming that standard residential design (with windows closed) will provide a 20 dBA of attenuation in accordance with the County of Riverside's *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures Memorandum* (January 15, 2004).
4. The exterior noise standard for single- and multi-family residential uses is 60 dBA CNEL, and the interior noise threshold is 45 dBA CNEL in the City of Indio
5. The County of Riverside exterior noise standard for single- and multi-family residential uses is 60 dBA CNEL, and the interior noise threshold is 45 dBA CNEL.
6. The City of Indio exterior noise standard for commercial retail and industrial uses is 70 dBA CNEL.
7. There is no noise standard for vacant land.
8. There is no interior noise standard for commercial uses or vacant land.

Source: Michael Baker International 2018d.

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

Less Than Significant Impact With Mitigation. Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The vibration produced by construction equipment is illustrated in Table 3-20, Typical Vibration Levels for Construction Equipment.

TABLE 3-20 TYPICAL VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

EQUIPMENT	APPROXIMATE PEAK PARTICLE VELOCITY AT 15 FEET (inches/second)	APPROXIMATE PEAK PARTICLE VELOCITY AT 25 FEET (inches/second)	APPROXIMATE PEAK PARTICLE VELOCITY AT 42 FEET (inches/second)
Scrapers	95	89	83
Bulldozers	91	85	79
Heavy Trucks	94	88	82
Backhoe	86	80	74
Pneumatic Tools	91	85	79
Concrete Pump	88	82	76

Source: Michael Baker International 2018d.

The nearest structures to the project site include residential uses adjoining the roadway (approximately 15 feet away), Martin Van Buren Elementary School approximately 478 feet north of the roadway and New Seasons Church approximately 560 feet north of the roadway. Groundborne vibration decreases rapidly with distance. As indicated in Table 3-20, based on the Federal Transit Administration data, vibration velocities from typical heavy construction equipment operation that would be used during project construction range from 0.006 to 0.452 inch-per-second peak particle velocity (PPV) at 15 feet from the source of activity. With regard to the proposed project, groundborne vibration would be generated primarily during grading activities on-site and by off-site haul-truck travel. The nearest existing residential uses are located within 15 feet north of the roadway. As presented in Table 3-20, vibration levels associated with vibratory rollers within 15 feet would exceed the 0.2 inch-per-second PPV significance threshold for vibration (Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006). Mitigation Measure NOI-2 would be required to ensure that the construction activities do not use vibratory rollers within 42 feet of the nearest sensitive receptor. With the implementation of Mitigation Measure NOI-2, the proposed construction activities would not exceed the 0.2 inch-per-second PPV significance threshold for vibration. Additionally, construction activities

would be limited and would not be concentrated within 15 feet of the adjacent structures for an extended period of time. Therefore, vibration impacts would be less than significant.

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

No Impact. The project site is not located within the vicinity of a private airstrip or related facilities. The nearest airport is the Jacqueline Cochran Regional Airport, located approximately 4.95 miles to the southeast of the project site. The Riverside Airport Land Use Commission (ALUC) amended the *Riverside County Airport Land Use Compatibility Plan* in June 2005. The project site is not located within the *Jacqueline Cochran Regional Airport Compatibility Map.* Therefore, implementation of the proposed project would not result in an impact related to exposure of people residing or working in the project area to excessive or high noise impact levels associated with aircraft and no mitigation is required.

3.13.5 Mitigation Measures

NOI-1 Noise control shall conform to the provisions in Section 14-8.02, "Noise Control" of the Standard Specifications and these Special Provisions.

The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dBA LMax at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals must be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Payment

Full compensation for conforming to the requirements of this Section, "Noise Control," shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

NOI-2 During project construction, all vibratory roller equipment operating on the project site shall not be utilized within 42 feet of the nearest sensitive receptor to minimize vibration impacts.

3.14 Population and Housing

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Affected Environment

The proposed project is surrounded by single-family residential, commercial, retail/restaurant, institutional uses, and vacant land. Riverside County's population was estimated to be 2,387,71, and the number of housing units in the County was estimated at 831,375 with an average of 3.25 persons per household between 2012-2016 (U.S. Census Bureau 2018a). The City of Coachella's population was estimated to be 44,953, and the number of housing units in the City was estimated to be 9,903 with an average of 3.85 persons per household between 2012-2016 (United States Census Bureau 2018b). Finally, the City of Indio's population was estimated to be 88,488, and the number of housing units in the City was estimated to be 28,971 with an average of 3.10 persons per household between 2012-2016 (United States Census Bureau 2018b).

3.14.2 Impact Assessment

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)?

No Impact. The project would not include the construction of homes or businesses, nor would it extend roads into previously undeveloped areas or areas that are limited in potential for growth due to lack of transportation infrastructure. The proposed project would provide three additional travel lanes along an existing transportation route within the project limits. The project would relieve traffic congestion, increase mobility, and accommodate existing traffic conditions in the project area and is not a trip generating land use thereby inducing substantial unplanned population growth into the area. No direct or indirect growth would occur as a result of the proposed project and no mitigation is required.

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

No Impact. The proposed project would not displace existing people or housing or necessitate the construction of replacement housing. Reconstruction of driveways, fences, walls, and front yard improvements, if necessary, would be performed under construction easements or rights-of-entry and would be coordinated with property owners. No impact would occur and no mitigation is required.

3.14.3 Mitigation Measures

No mitigation measures are proposed.

3.15 Public Services

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

3.15.1 Affected Environment

Fire

The City of Coachella contracts with the County of Riverside Fire Department (RCFD) for fire protection and emergency services. The RCFD is a full-service public safety department which provides fire suppression and emergency medical services to City of Coachella. Fire Station #79 serves the City of Coachella from its downtown facility located at 1377 Sixth Street, Coachella (City of Coachella 2018c). The City of Coachella General Plan's Goal 7, Policy 7.11 is to coordinate with the RCFD to manage the distribution of fire stations and seek goals of 2.0 personnel per 1,000 population, provide fire protection within a 1.5 mile radius from the fire stations, and five-minute response times (City of Coachella 2015b). Surrounding areas outside the City of Coachella City limits are served by RCFD stations located in the cities of Indio, La Quinta, and Thermal as part of a Regional Fire and Emergency Medical Response plan.

Police/Sheriff

The Riverside County Sheriff's Department (Sheriff's Department) is contracted to provide comprehensive law enforcement services through the City of Coachella Police Department. The City of Coachella operates a substation from the Sheriff's Department located at 86625 Airport Boulevard, Thermal (City of Coachella 2018b). The City of Coachella General Plan's Goal 7, Policy 7.3 is to the extent feasible, raise the ratio of police officers to residents to a minimum of 1.3 officers per 1,000 residents, and maintain personnel and facilities in the police department necessary to provide the best response time feasible (City of Coachella 2015c). Police services within the City of Indio are provided by the City through the Indio Police Department – this department is headquartered in the city at 46800 Jackson Street.

Schools

Schools located within the vicinity of the project include Martin Van Buren Elementary School, Cesar Chavez Elementary School, and Theodore Roosevelt Elementary. The school located closest to the project site is Martin Van Buren Elementary School – this school is located approximately 478 feet north of the project site. There are no schools located within or immediately adjacent to the project site.

Parks

There are no city or county designated parks/recreational facilities located immediately adjacent to the project alignment. The nearest park/recreational facility to the project site is Rancho Las Flores Park, located in the City Coachella – this park is located approximately 1,000 feet south of the project site.

Other Public Facilities

Sunline Transit Agency provides public transportation in the Coachella Valley area and Riverside-Downtown Area during Peak Hours. Sunline Routes 90 and 111 are located in the vicinity of the project site; however, there are no bus stops or bus routes within the project alignment (Sunline Transit Agency 2018).

3.15.2 Impact Assessment

Would the Project:

a) 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 following public services:

Fire protection

Less Than Significant Impact. The proposed project involves the widening of an existing roadway which does not include residential or commercial components that would increase the population in the area resulting in the need to provide additional fire protection services, equipment, or facilities. The proposed project would enhance the operation of Avenue 48 through the project-related widening. As a result, the delivery of public services including fire protection and emergency services would improve, resulting in a beneficial impact to these services and the community. Short-term congestion related to the construction phase would be minimized with the implementation of a TCP, described below in Checklist Response 3.17.2 (a). The TCP would include, but not be limited to, the use of portable, changeable message signs, signs notifying emergency responders of upcoming construction, and a public awareness campaign related to the scheduling of the proposed project. No construction of new or expanded fire services or facilities would be required. Impacts would be less than significant and no mitigation is required.

Police protection

Less Than Significant Impact. The proposed project involves the widening of an existing roadway which does not include residential or commercial components that would increase the population in the area resulting in the need to provide additional police protection services, equipment, or facilities. The proposed project would enhance the operation of Avenue 48 through the project-related widening. As a result, the delivery of public services including fire protection and emergency services would improve, resulting in a beneficial impact to these services and the community. Short-term congestion related to the

construction phase would be minimized with the implementation of a TCP, described below in Checklist Response 3.17.2 (a). The TCP would include, but not be limited to, the use of portable, changeable message signs, signs notifying emergency responders of upcoming construction, and a public awareness campaign related to the scheduling of the proposed project. No construction of new or expanded fire services or facilities would be required. Impacts would be less than significant and no mitigation is required.

Schools

No Impact. There are no schools within the immediate area. Therefore, access to schools would not be impeded as a result of the proposed project, and no mitigation is required.

Parks

No Impact. The proposed project would not result in an increase in the demand for existing neighborhood or regional park facilities nor would it result in the need for construction of new or expanded recreational facilities. Therefore, no impact would occur and no mitigation is required.

Other Public Facilities

No Impact. The proposed project would not impact other public facilities, including bus routes, or result in the demand for additional public facilities and no impact would occur.

3.15.3 Mitigation Measures

No mitigation measures are proposed.

3.16 Recreation

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:				
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.16.1 Affected Environment

The nearest park/recreational facility to the project site is Rancho Las Flores Park, located in the City Coachella – this park is located approximately 1,000 feet south of the project site. There are no existing or planned parks along the project corridor.

3.16.2 Impact Assessment

Would the Project:

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

No Impact. The proposed project would not result in an increase in the demand for existing neighborhood or regional park facilities; therefore, no impacts related to demand or use of recreation facilities would occur and no mitigation is required.

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. As stated previously, a component of the proposed project includes constructing new five-foot-wide bicycle lanes in the eastbound and westbound directions of Avenue 48. However, implementation of the project would not otherwise require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. Therefore, no impact would occur and no mitigation is required.

3.16.3 Mitigation Measures

No mitigation measures are proposed.

3.17 Transportation

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☒	☐	☐

3.17.1 Affected Environment

The segment of Avenue 48 that would be widened as part of the proposed project provides key access to SR-86 and I-10 for travelers in the project vicinity within the City of Coachella and the City of Indio. The project site is situated within developing areas of the City of Coachella, the City of Indio, and the County, adjacent to and west of Indio Boulevard, west of SR-86, and south of I-10. The roadway is surrounded by single-family residential, commercial, retail/restaurant, institutional uses, and vacant land.

3.17.2 Impact Assessment

Would the Project:

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

Less Than Significant Impact with Mitigation. The proposed project would provide three additional travel lanes along Avenue 48 within the project limits (one additional westbound lane and two additional eastbound lanes) to relieve traffic congestion, increase mobility, and accommodate existing traffic conditions in the area. However, additional vehicular traffic would occur in the area after project implementation due to anticipated general growth in the area. Table 3-21 depicts the ADT volumes along the project corridor during the Existing Year (2017), Opening Year (2019), and Horizon Year (2038) Without Project and With Project conditions. Table 3-21 also shows the corresponding LOS for each of the above-described Without Project and With Project scenarios for the Existing Year, Opening Year, and Horizon Year. LOS designations range from A to F, with LOS A representing no delays (traffic flows freely); LOS C representing minimal delays (few restrictions on speed); and LOS F representing excessive traffic delays (very congested traffic). Per the General Plans for the County and cities of Coachella and Indio, the LOS goal is to achieve and maintain LOS D or better on all roadways and intersections.

As shown in Table 3-21, Avenue 48 is operating at LOS B in the Existing Year (2017) within the project limits. Avenue 48 would experience an increase in ADT without the project between the Existing Year

(2017) and Horizon Year (2038) due to general growth in the area. Although additional trips would occur along Avenue 48 after project implementation due to general growth in the area associated with projected increased development, the project would generally relieve existing and forecast traffic congestion in the project area along Avenue 48. It is anticipated that LOS would decrease in the Horizon Year (2038) when comparing Without Project conditions (i.e., LOS C) versus With Project conditions (i.e., LOS D) for the Avenue 48 study segment from Dillon Road to Indio Boulevard – the lower LOS for this particular study segment with the project in the Horizon Year (2038), as compared to Without Project conditions in the same year, can be attributed to general growth in the project vicinity and the associated increase in vehicular traffic associated with that anticipated growth. However, the proposed project would achieve and maintain LOS D or better on all roadway segments, consistent with the General Plans for the County and cities of Coachella and Indio.

Sunline Transit Agency provides public transportation in the Coachella Valley area and Riverside-Downtown Area during Peak Hours. Sunline Routes 90 and 111 are located in the vicinity of the project site; however, there are no bus stops or bus routes within the project corridor (Sunline Transit Agency 2018). Bus service would be maintained along the route during construction. The County would coordinate with the Sunline Transit Agency to ensure their operations are not interrupted during construction activities (refer to Mitigation Measure TRA-1).

Temporary lane closures and striping would occur during project construction; however, two-way travel along Avenue 48 through the project corridor would be maintained during construction. During final design, construction and traffic management plans would be prepared to minimize disruption to the public. Appropriate measures would be incorporated to ensure safe vehicle and pedestrian movement through the project area during construction. To facilitate the movement of traffic during construction, a TCP would be prepared and implemented during construction (refer to Mitigation Measure TRA-1).

TABLE 3-21 PROJECT AREA TRAFFIC OPERATIONS

AVENUE 48 ROADWAY SEGMENT	TOTAL ADT	LOS
Existing Conditions (2017)		
Van Buren Street to Dillon Road	11,893	B
Dillon Road to Indio Blvd.	12,205	B
Opening Year (2019)[1] Without Project		
Van Buren Street to Dillon Road	12,272	B
Dillon Road to Indio Blvd.	12,739	A
Opening Year (2019)[1] With Project		
Van Buren Street to Dillon Road	12,272	A
Dillon Road to Indio Blvd.	12,739	A
Horizon Year (2038) Without Project		
Van Buren Street to Dillon Road	22,780	F
Dillon Road to Indio Blvd.	35,458	C
Horizon Year (2038) With Project		
Van Buren Street to Dillon Road	29,403	B
Dillon Road to Indio Blvd.	41,140	D

Notes:
1. Opening Year With Project and Without Project traffic volumes would be the same.

Source: County of Riverside 2018.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. The proposed project would not conflict with the applicable congestion management program, ordinances, or policies related to the circulation system nor would it conflict with or be inconsistent with CEQA Guidelines Section 15064.3 (b)(2). As stated in Checklist Response 3.8.3 (a) above, the VMT between the existing and future scenarios is attributed to projected economic and population growth in the area, and is not a direct result of project implementation. The proposed project would not cause an increase in traffic since there would be no trip generation resulting from its implementation project. The project would not construct, nor facilitate the construction of, any new homes or businesses that would generate new vehicle trips. Implementation of the proposed project would generally improve traffic conditions along Avenue 48 and would generally reduce congestion when compared to the existing conditions. Furthermore, the proposed project would achieve and maintain LOS D or better on all roadways and intersections, consistent with the General Plans for the County and cities of Coachella and Indio. Therefore, there would be a less than significant impact, and no mitigation is required.

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

No Impact. The proposed project would not substantially increase safety hazards due to a geometric design feature or incompatible use. The project will be designed in accordance with pertinent engineering standards. No impact would occur in this regard, and therefore no mitigation is required.

d) Result in inadequate emergency access?

Less Than Significant Impact With Mitigation. As discussed above, construction-related delays may occur, although the proposed construction would be staged to keep roadways within the project area open to two-way traffic. A TCP would be implemented during construction to ensure safety and efficient flow of traffic throughout the project area during construction. A component of the TCP would be to coordinate with the emergency service providers to ensure their operations can be adjusted. In addition, none of the roadways in the project area are dedicated as emergency evacuation routes. The improvements proposed as part of the project would improve overall circulation. It is anticipated that construction of the proposed project would have a beneficial effect on emergency vehicle response times due to the new traffic lanes and roadway improvements. With implementation of Mitigation Measure TRA-1, impacts would be less than significant and no further mitigation is required.

3.17.3 Mitigation Measures

TRA-1 Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a traffic control plan (TCP).

3.18 Tribal Cultural Resources

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

The information in this section is based on the *Cultural Resource Assessment* (Applied EarthWorks, Inc. 2018).

3.18.1 Affected Environment

Native American Coordination

Sacred Lands Search Letter and Responses

As part of the *Cultural Resource Assessment*, Applied Earthworks contacted the NAHC on July 20, 2017, for a review of the sacred lands file (SLF). The purpose of the SLF search request was to determine if any known Native American cultural properties (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the project area. The NAHC responded on July 25, 2017, stating that the records search failed to indicate the presence of Native American cultural resources within the immediate project area. A copy of the NAHC response is provided in Appendix B of the *Cultural Resource Assessment.*

AB 52 Consultation

The County sent notification letters, pursuant to AB 52 procedures, to pertinent Native American tribes on August 31, 2017. The letters informed the tribes of the proposed project and included a brief project description, location map, and County contact information. Letters were sent via United States Postal Service certified mail to the following individuals on the County's notification list, as follows:

- Pattie Garcia-Plotkin, Tribal Preservation Officer (THPO), Agua Caliente Band of Cahuilla Indians
- Jacquelyn Barham, Cabazon Band of Mission Indians
- Anthony Madrigal, Cahuilla Band of Indians
- David Harper, THPO, Colorado River Indian Tribes
- Andrew Salas, Chairman, Gabrieleno Band of Mission Indians – Kizh Nation
- Michael Mirelez, Cultural Resource Coordinator, Torres Martinez Desert Cahuilla Indians
- Ray Huaute, Morongo Cultural Heritage Program
- Shasta Gaughen, THPO, Pala Band of Mission Indians
- Ebru Ozdil, Planning Specialist, Pechanga Cultural Resources Department
- Arlene Kingery, THPO, Quechan Indian Nation
- Joseph D. Hamilton, Chairman, Ramona Band of Cahuilla
- Destiny Colocho, Manager, Rincon Band of Luiseño Indians
- Anthony Morales, Chairperson, Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Lee Clauss, Director, San Manuel Band of Mission Indians
- Joseph Ontiveros, Cultural Resource Director, Soboba Band of Luiseño Indians
- Darrel Mike, Tribal Chairperson, Twenty-Nine Palms Band of Mission Indians

The tribes had 30 days from the receipt of the formal notification to request AB 52 consultation. Four responses were received in response to the initial notification letter. Only one tribe, the Twenty-Nine Palms Band of Mission Indians, requested formal AB 52 consultation as part of the proposed project. A summary of each of the responses received from Native American tribes, in response to the initial notification letter sent by the County, is provided below:

- In a letter dated September 6, 2017, Shasta Gaughen, THPO of the Pala Band of Mission Indians, declined AB 52 consultation and deferred to other tribes in closer proximity to the project.
- On September 20, 2017, the County received a letter via email from Katie Croft, archaeologist at the Agua Caliente Band of Cahuilla Indians THPO, stating that the Agua Caliente Band of Cahuilla Indians defers to the Cabazon Band of Mission Indians and that this letter concludes their consultation with the County.
- On October 11, 2017, the County received a letter from the Twenty-Nine Palms Band of Mission Indians. The Twenty-Nine Palms Band of Mission Indians stated that the project area is located in a culturally sensitive area within the Chemehuevi Traditional Use Area. The Twenty-Nine Palms Band of Mission Indians requested that the County consult with the tribe for the purposes of AB 52.
- On October 16, 2017, the County received a letter from the Rincon Band of Luiseño Indians. The Rincon Band of Luiseño Indians noted that the project is located outside of the Luiseño Aboriginal Territory. They recommended that the County located a tribe within the project Area in order to receive direction on how to handle any inadvertent findings.

The County sent an AB 52 consultation initiation letter via e-mail and certified mail on November 6, 2017 to the Twenty-Nine Palms Band of Mission Indians. In response, a teleconference was subsequently conducted on December 5, 2017 that included County representatives, and the THPO and Tribal Cultural Specialist from the Twenty-Nine Band of Mission Indians. During the meeting, the proposed project elements were discussed along with the project's Impact Area and the status of the cultural resource study. The Twenty-Nine Band of Mission Indians stated that a number of sensitive prehistoric archaeological sites are located in the vicinity of the project. The tribe requested Geographic Information System (GIS) data for the current design plans and a copy of the draft *Cultural Resource Assessment*

Report in order that they could review the results of the study. A copy of the draft report was sent to the Twenty-Nine Band of Mission Indians via email on December 20, 2017. The Twenty-Nine Band of Mission Indians Comments provided comments on the draft report to the County on February 5, 2018.

A meeting that included the County's project Planner, the THPO and Tribal Cultural Specialist from the Twenty-Nine Band of Mission Indians, and Applied Earthworks personnel was then held at the County's office on February 29, 2018 to discuss the cultural sensitivity of project area and proposed cultural resource mitigation measures. During the meeting, the Twenty-Nine Band of Mission Indians requested several revisions to the draft cultural resource mitigation measures that were included in the *Cultural Resource Assessment* Report. These revisions included adding language stipulating that a Native American representative would be present at the cultural resource awareness and sensitivity training prior to the start of construction. In addition, the Twenty-Nine Band of Mission Indians also requested that a measure be included that required Native American monitoring during ground-disturbing activities that extend into undisturbed native soils. On March 21, 2018, a revised set of mitigation measures was emailed to the THPO and Tribal Cultural Specialist for review and comment. The Twenty-Nine Band of Mission Indians responded with a letter on March 28, 2018, that included the revised cultural resource mitigation measures that were approved by the THPO. The letter stated that compliance with the revised conditions would mitigate the current concerns the Twenty-Nine Band of Mission Indians had regarding the project. A copy of the letter, along with other non-confidential correspondence, is provided in Appendix C of the *Cultural Resource Assessment*.

3.18.2 Impact Assessment

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

a) 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)?

Less Than Significant With Mitigation. As discussed in Checklist Response 3.5, Cultural Resources, a records search was conducted by the EIC on February 10, 2017. This search included the project area with an additional one-mile radius buffer that extended out from the project boundary (referred to as the project "study area"). The objective of this records search was to identify prehistoric and historic period archaeological and built-environment resources that had been previously recorded within the study area during prior cultural resource investigations.

Additional sources consulted during the archaeological literature and records search include the NRHP, the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File. There are no listed historic properties, historical resources, or historic landmarks recorded within the project study area.

Results of the records search indicate that no less than 51 investigations have been conducted previously within the project study area (refer to Table A-1 in Appendix C of this IS/MND). Five of the previous investigations (RI-4577, RI-4828, RI-4829, RI-4830, and RI-5452) intersected portions of the project area. As a result, approximately 70 percent of the project impact area has been investigated by previous studies.

The cultural resource survey identified one historical built-environment resource (Avenue 48 [33-028164]) within the project area. Avenue 48 was evaluated for listing on the CRHR as part of this study. The segment of Avenue 48 within the project area is a modern two-lane asphalt-paved road that

follows an older historical road alignment and is not recommended eligible for listing on the CRHR. As such, there are no historical resources as defined by CEQA within the project area and a finding of no historical resources affected for the proposed project is recommended.

The *Cultural Resource Assessment* (2018) identified no archaeological resources located within the project area. However, the lack of surface evidence of archaeological resources does not preclude their subsurface existence. Record search data indicate a number of prehistoric and historic-period archaeological sites have been recorded within one-mile of the project boundary. As such, intact subsurface archaeological deposits may be encountered during construction activities. It is therefore recommended that a qualified archaeological monitor be present during project-related ground-disturbing activities in undisturbed native sediments. With implementation of Mitigation Measures CUL-1 and CUL-2 impacts to cultural resources would be less than significant. Mitigation Measure CUL-3 would ensure impacts to buried cultural resources inadvertently discovered during construction would be less than significant.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource 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. Refer to Checklist Response 3.18.2 (a) above for a discussion.

3.18.3 Mitigation Measures

Refer to mitigation measures in Section 3.5.3 (Cultural Resources).

3.19 Utilities and Service Systems

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	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 stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

3.19.1 Affected Environment

A variety of local and regional purveyors provide and maintain utility and service system facilities associated with water, sewer, electric, gas, telephone, and cable. Existing utilities in the area include: potable water, reclaimed water, sewer, electrical, telecommunications, gas, and fiber optic. The following facilities may be adjusted and/or relocated as part of the project design: utility poles, water valves, blow-off valves, fire hydrants, water meters, electrical vaults, and telecommunication boxes. However, no utility relocations are anticipated to take place outside the designated project area.

3.19.2 Impact Assessment

Would the Project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. The proposed project involves the widening of an existing roadway and would not require or result in the relocation or construction of new water, wastewater treatment, electrical power, natural gas, or telecommunication facilities. The proposed project would require the extension of existing storm drain culverts to ensure proper drainage. The proposed project is not anticipated to substantially increase stormwater runoff. Furthermore, no new storm drainage facilities are anticipated to

be required outside of the ROW. The existing storm drain system is anticipated to be adequate to serve the proposed project. Refer to Section 3.10 (Hydrology and Water Quality) for more information regarding project-related water quality impacts and control. Impacts on the existing stormwater drainage facilities would be considered less than significant and no mitigation is required.

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

No Impact. The proposed project does not contain any components that would require long-term water services or the provision of new water supplies or the expansion of existing facilities. No impact would occur and no mitigation is required.

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 projects projected demand in addition to the providers existing commitments?

No Impact. The proposed project does not contain any components that would generate any wastewater that would require treatment at a water treatment plant. No impact would occur and no mitigation is required.

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?

Less Than Significant Impact. Due to the nature of the project, solid waste would not be generated during the project's operation phase. However, construction of the proposed project would generate wastes that would be disposed of in local or regional facilities such as concrete rubble, non-hazardous metal, and refuse from construction workers. Construction of the project would marginally increase the amount of solid waste disposal above current levels. However, due to the small scale and short duration of project construction, construction of the project would not generate solid wastes in excess of state or local standards, or in excess of the capacity of local infrastructure nor would it impair the attainment of solid waste reduction goals. Impacts relative to construction-related solid waste disposal would be less than significant and no mitigation is required.

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

No Impact. The solid waste generated during the construction of the proposed project would be disposed of in accordance with all applicable state, regional, and local management and reduction statutes and conservation measures regarding solid waste and recycling of waste materials. Operation of the proposed project would not generate any solid waste. No impact would occur and no mitigation is required.

3.19.3 Mitigation Measures

No mitigation measures are proposed.

3.20 Wildfire

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?	☐	☐	☐	☒
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?	☐	☐	☒	☐

3.20.1 Affected Environment

The project site is situated within developing areas of the City of Coachella, the City of Indio, and the County. The roadway is surrounded by single-family residential, commercial, retail/restaurant, institutional uses, and vacant land. As designated on the Western Coachella Valley Area Plan, Figure 12, Wildfire Susceptibility, the project site is not located within a wildfire severity zone (County of Riverside 2017).

3.20.2 Impact Assessment

Would the Project:

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

Less Than Significant Impact. As discussed in Checklist Response 3.9.2 (f), temporary lane closures and striping would occur during project construction; however, two-way travel along Avenue 48 through the project corridor would be maintained during construction activities with at least one travel lane open in each direction at all times. A TCP would be prepared and may include, but not be limited to, designated construction routes, designated construction parking areas, appropriate detours, safety precautions, and the use of changeable message signs. The proposed project is not anticipated to interfere with an adopted emergency response plan or emergency evacuation plan; impacts would be less than significant and no further mitigation is required.

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?

No Impact. The project does not include any habitable structures. Furthermore, the project site is not located within a wildfire severity zone as shown on the Western Coachella Valley Area Plan, Figure 12, Wildfire Susceptibility (County of Riverside 2017). The project would not expose people or structures to a significant risk involving wildfires. Therefore, the project would not exacerbate wildfire risks and would not expose occupants to pollutant concentrations from a wildfire.

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

No Impact. The proposed project involves the widening of an existing roadway and does not require the construction or installation of additional roads, fuel breaks, emergency water sources, power lines, or other utilities. The project would not exacerbate wildfire risks in the project area.

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. The project site is surrounded by single-family residential, commercial, retail/restaurant, institutional uses, and vacant land. The project site and immediate surrounding area are relatively level, with a low potential for landslides. As discussed in Checklist Response 3.10.2 (c) above, the project would not substantially alter the existing drainage patterns of the site or result in substantial erosion or siltation on- or off-site. The existing drainage patterns of the project would not create large slopes on the project site. Therefore, implementation of the proposed project would not expose people or structures to significant risks due to runoff, post-fire slope instability, or drainage changes.

3.20.3 Mitigation Measures

No mitigation measures are proposed.

3.21 Mandatory Findings of Significance

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Would the Project:

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, 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?

Less Than Significant Impact. As addressed in the pertinent sections of this Initial Study, the proposed project would not substantially degrade the quality of the environment. In addition, the project would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. Furthermore, the proposed project would not result in the elimination of important examples of major periods of California history or prehistory. Therefore, impacts in this regard are considered less than significant.

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 other current projects, and the effects of probable future projects)?

Less Than Significant Impact With Mitigation. As described in the previous sections of this IS/MND, Checklist Responses 3.1 through 3.20, the proposed project would result in less than significant impacts with incorporation of mitigation measures for air quality, biological resources, cultural resources/tribal cultural resources, hazards/hazardous wastes, hydrology and water quality, noise, and transportation/traffic. Implementation of mitigation measures identified in the aforementioned resource areas of this IS/MND are required to reduce impacts to a less than significant level.

A cumulative impact could occur if the project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably foreseeable future projects for each resource area. The cumulative study area is generally confined to an approximate one-mile radius. A review of the City of Coachella's, the City of Indio's, and the County's websites, as well as direct contact with city representatives, was conducted in order to compile a list of past, present, and reasonably foreseeable future projects. These cumulative projects are listed in Table 3-22.

TABLE 3-22 CUMULATIVE PROJECTS LIST

PROJECT	LOCATION / ADDRESS	DESCRIPTION	APPROXIMATE DISTANCE FROM THE PROJECT AREA
CITY OF COACHELLA			
Coachella Village	South side of Avenue 48, west of Van Buren Street	242 new apartments with recreation and daycare buildings on 9.69 acres.	0.2 mile southwest of project site
Glenroy Resort Development	Southeast corner of Avenue 48 and Van Buren Street	A mixed-use development consisting of 130 single story resort bungalows with a total of 624 rooms, as well as an 8,050 square foot conference center, 2,000 square foot maintenance building, 12,000 square foot office, gym and food service building with an indoor entertainment area, a four story, 130 room hotel; a 3,600 square foot restaurant, a 3,120 square foot medical marijuana dispensary, a 2,500 square foot general store, and a 2,500 square foot coffee shop with drive-through access.	Directly adjacent, south of Avenue 48
Cultivation Technologies	84-811 Avenue 48	A commercial cannabis cultivation industrial complex with common parking and security fencing, to be located on 6.06 acres of land in the M-W (Wrecking Yard) zone. The project will consist of two industrial buildings (totaling 111,500 square feet).	0.53 mile east of project site, south side of Avenue 48
Coachella Research Park 1	Northeast corner of Avenue 48 and Harrison Street	Construction of a cannabis cultivation industrial campus with common parking, landscaping and security fencing, to be located on 11.25 acres. The project will consist of six, three story industrial buildings (totaling 312,700 square feet).	0.76 mile east of project site
Coachella Research Park 2	48-451 Harrison Street	Construction of sixteen, three-story industrial buildings (totaling 740,880 square feet) for cannabis cultivation on 20 acres.	0.68 mile southeast of project site

PROJECT	LOCATION / ADDRESS	DESCRIPTION	APPROXIMATE DISTANCE FROM THE PROJECT AREA
Coachella Warehouses	Southwest corner of Avenue 48 and Harrison Street	Construction of a commercial cannabis cultivation and processing complex with common parking, landscaping and security fencing, to be located on 14.61 acres. The project will consist of twenty industrial buildings ranging in size from 4,000 to 16,000 square feet, (totaling 256,200 square feet) at 84-851 Avenue 48 (APN 603-232-021, -022, & -024).	0.76 mile east of project site
Kismet Organic	48-050 Harrison Street (APN 603-290-001)	Construction of a new 77,400 square foot commercial cannabis cultivation facility with perimeter fencing, landscaping, retention basin, parking lot and carport structures on 4.8 acres partially-developed site.	0.80 mile east of project site, south side of Avenue 48
Date Palm Business Park (Phase I)	49723 Harrison Street	Subdivision and future construction of a 1.2 million square foot light industrial business park, consisting of commercial cannabis cultivation and related uses including processing, manufacturing, distribution and office uses. Phase 1 consists of an IID electrical substation and two lettered parcels proposed for common-area retention basins, with construction of a commercial cannabis cultivation center in two buildings totaling 120,000 square feet including 140 parking spaces.	1.13 miles southeast of project site
CoachellGro Corp.	48-490 Harrison Street	Construction of a new cannabis cultivation facility consisting of a 63,248 square foot 2-story office/head-house building and a 193,803 square foot industrial cannabis cultivation building with greenhouse roof structure, including off-street parking, landscaping and site improvements.	0.97 mile southeast of project site
Coachella Brands	Avenue 48	Construction of a new cannabis cultivation facility consisting of a 63,248 square foot 2-story office head-house building and a 193,803 square foot industrial cannabis cultivation building with greenhouse roof structure, including off-street parking, landscaping and site improvements.	0.5 mile east of the project site
CannTech Facility	84-801 Avenue 48	Phase construction of a new 67,240 square foot commercial cannabis cultivation facility on a 3.2-acre parcel.	0.44 mile east of project site
CITY OF INDIO			
Convenience store/gas station and two drive-through restaurants pads	Northeast corner of Indio Boulevard and Avenue 48	Construction of a convenience store/gas station and two drive-through restaurants pads on an approximate 3.56-acre parcel.	Adjacent to the project site (along Avenue 48)

The following analysis evaluates the project's potential to contribute considerably to a cumulative impact. As described in the previous sections of this Initial Study, Checklist Responses 3.1 through 3.20, the proposed project would result in no impact or impacts considered less than significant on the following resource areas: aesthetics, agricultural and forest resources, energy, geology and soils, greenhouse gas emissions, land use and planning, mineral resources, population and housing, recreation, utilities and service systems, and wildfire and would not contribute either directly or indirectly to a cumulatively considerable impact in these resource areas. The potential for the proposed project to result in cumulative impacts that would be considered significant in the above-mentioned resource areas is considered low, and the proposed project does not have the potential to result in a cumulative impact that would affect the health or sustainability of any of these resource areas.

For resources identified as having a less than significant impact with mitigation or a less than significant impact, a preliminary review of the potential impacts identified was conducted to determine if a reasonably foreseeable cumulative impact could occur. Based on this review it was determined that the resources that could potentially contribute to significant cumulative impacts to a considerable degree when combined with the past, present, and reasonably foreseeable cumulative projects are: air quality, biological resources, cultural resources, hazard/hazardous materials, hydrology and water quality, noise, and transportation/traffic. A cumulative evaluation for these environmental resource areas is provided below.

Air Quality

As detailed in Checklist Response 3.3.3 (a), the project's short-term construction and long-term operational emissions for CO, NO_x, ROG, PM_{10}, and $PM_{2.5}$ would not exceed the applicable SCAQMD thresholds. With respect to cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the 2016 AQMP pursuant to FCAA mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures (Mitigation Measures AQ-1 and AQ-2). Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. In addition, the proposed project would comply with adopted 2016 AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

Similar to the proposed project addressed in this Initial Study, future development projects would also be required to adhere to pertinent SCAQMD rules and mandates, as well as the pertinent provisions of CEQA, to implement mitigation measures, as necessary and feasible, to avoid significant impacts to air quality. Therefore, the proposed project's incremental contribution to cumulative air quality related impacts, when combined with past, present, and reasonably foreseeable projects, would be less than cumulatively considerable.

Biological Resources

As described in Checklist Section 3.4.2 (a), no special-status plant or wildlife species were observed within the survey area during the habitat assessment. On-site and surrounding land uses have eliminated naturally occurring habitats within the survey area, reducing the suitability of the habitat to support special-status plant or wildlife species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that no special-status plant and wildlife species are expected to occur within the survey area, and are presumed absent. Therefore, it was determined that implementation of the proposed project would have "no effect" on special-status plant and wildlife species known to occur in the general vicinity of the survey area. No impact would occur and no mitigation would be required.

The project site is located within the boundaries of the CVMSHCP Area, but is not located within any Conservation Areas, Preserves, Cores, or Linkages. The proposed project is listed as a "Covered Activity" under the CVMSHCP. With implementation of the applicable avoidance, minimization, and/or mitigation measures as identified herein, the proposed project would be fully consistent with the biological goals and objectives of the CVMSHCP and avoid significant impacts to sensitive plant and animal species.

Future development projects identified herein in support of the cumulative impacts analysis would be required to adhere to the requirements of the CVMSHCP, and other pertinent local regulations, similar to the proposed project and would be required to implement mitigation measures, as necessary, to minimize or otherwise avoid significant impacts to biological resources. Therefore, the proposed project's incremental contribution to cumulative impacts to biological resources, when combined with past, present, and reasonably foreseeable projects, would be less than cumulatively considerable.

Cultural and Historical Resources

As described in Checklist Responses 3.5.2 (a), (b), and (c), the cultural resource assessment identified no archaeological resources within the project area. However, the lack of surface evidence of archaeological resources does not preclude their subsurface existence. Record search data indicate a number of prehistoric and historic-period archaeological sites have been recorded within one-mile of the project boundary. As such, intact subsurface archaeological deposits may be encountered during construction activities. It is therefore recommended that a qualified archaeological monitor be present during project-related ground-disturbing activities in undisturbed native sediments. With implementation of Mitigation Measures CUL-1 and CUL-2 impacts to cultural resources would be less than significant.

The project site and vicinity have been surveyed for archaeological resources and no human remains interred outside formal cemeteries were detected during the survey. Given the disturbed nature of the project site, it is unlikely project construction would disturb any buried human remains. However, if human remains are discovered during construction implementation of Mitigation Measure CUL-3 would ensure impacts to buried cultural resources inadvertently discovered during construction would be less than significant.

The cultural resource survey identified one historical built-environment resource (Avenue 48 [33-028164]) within the project area. Avenue 48 was evaluated for listing on the California Register as part of cultural resource assessment. The segment of Avenue 48 within the project area is a modern two-lane asphalt-paved road that follows an older historical road alignment and is not recommended eligible for listing on the California Register. As such, there are no historical resources as defined by CEQA within the project area and a finding of no historical resources affected for the proposed project is recommended.

Cultural resources are generally not considered subject to cumulative effects because they are either individually directly or indirectly affected in a way that changes the significance of the property, or they are not affected in a way that changes the significance of the property. Development in the City of Coachella, the City of Indio, and the County, and adjacent jurisdictions would require grading and excavation that could potentially affect unanticipated archaeological and paleontological resources, including human remains. It is possible that these projects could cause a significant impact on historic properties and unidentified buried archaeological resources, including buried human remains, through possible ground disturbance associated with construction activities. CEQA requirements for protecting archaeological resources and CEQA and Health Code requirements related to the treatment of human remains are applicable to development in the City of Coachella, the City of Indio, and the County as well as adjacent jurisdictions, as are local cultural resource protection provisions. If subsurface cultural resources are protected upon discovery as required by law, impacts to those resources would be less than significant. Further, with the measures that would be imposed and enforced if unanticipated resources are

discovered, the contribution of the proposed project to the cumulative destruction of subsurface cultural resources throughout the City of Coachella, the City of Indio, the County, and the region would not be cumulatively considerable.

Hazards/Hazardous Materials

The cumulative study area for hazards/hazardous materials includes the area within a one-mile radius of the project site. As discussed in Checklist Response 3.9.2 (d), a database search was conducted to evaluate the potential for the project site or properties near the project site to create adverse environmental impacts. The database search for the proposed project concluded that the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As discussed in Checklist Response 3.8.2 (a), construction of the proposed project would involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. However, all hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal regulations. Long-term operations at the project site would not result in the release of hazardous materials.

The Phase I ESA did identify the presence of LBPs in traffic striping materials and PCBs potentially present in pole-mounted transformers, which may be disturbed during project construction. There is the potential to encounter unknown hazardous materials in soils during site disturbance activities, which present a concern to workers and the public during construction. Long-term operations at the project site would not result in the release of hazardous materials. With incorporation of Mitigation Measures HAZ-1 through HAZ-3, the potential for hazards related to the release of hazardous materials considered less than significant.

Future development projects identified would be required to undergo investigations similar to the proposed project and would be required to implement mitigation measures to remediate or otherwise avoid release of hazardous materials into the environment. The proposed project's incremental contribution to cumulative impacts from hazards and hazardous materials, when combined with past, present, and reasonably foreseeable projects, would be less than cumulatively considerable.

Hydrology and Water Quality

A significant cumulative impact related to hydrology and water quality would occur if the impacts created by the proposed project, even if individually less than significant, would make a considerable contribution to a cumulatively significant impact when considered together with similar impacts created by other past, present, and reasonably foreseeable future projects. Individually, the project would not place housing within a 100-year floodplain; would not place structures in an area that would impede or redirect flood flows; would not expose people or structures to inundation from failure of a dam or levee; and would not result in inundation due to seiche, tsunami, or mudflows. Therefore, the project would not contribute to a potential cumulative impact in relation to these effects.

As discussed in Checklist Response 3.10.2 (a), project-related construction would disturb more than one acre of ground; therefore, the County would be required to electronically file a NOI with the SWRCB. Project construction activities could result in wind and rain erosion of the existing onsite soils and could increase the amount of suspended solids contained in storm flows due to erosion of exposed soils. Non-sediment potential contaminants that could enter water runoff from the construction site include paints, solvents, metals, oil, gasoline, petroleum products, concrete-related products, chemicals, and trash. All of these contaminants could contribute to the degradation of water quality.

The existing area of impervious surface within the project limits is approximately 4.9 acres, whereas the area of impervious surface after project improvements is estimated to be approximately 6.4 acres. Therefore, the proposed project is anticipated to result in a total increase of approximately 1.5 acres of net new impervious surface as compared to existing conditions. Although the rate and quantity of runoff would change due to the increase in the amount of impervious surface area, the project would have a low potential to impact surface water quality. Implementation of Mitigation Measure WAT-1 would ensure that the proposed project would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality. Therefore, impacts would be less than significant with mitigation incorporated.

Cumulative projects would be subject to the same federal, state, and local regulations regarding water quality standards and would typically be required to draft and implement SWPPPs with specific provisions that address erosion and sedimentation control during construction and operation. These impacts would be localized and controlled at the source and would not be cumulatively considerable.

Noise

Adverse noise and vibration impacts during construction of the proposed project would be localized and would occur intermittently for varying periods of time throughout the construction period. Short-term cumulative impacts related to ambient noise and vibration levels could occur if construction associated with the proposed project as well as surrounding current and future development were to occur simultaneously. To the extent that construction periods overlap, there is a potential for an adverse impact on sensitive receptors in the vicinity of the project with a cumulative noise level greater than the noise generated solely at the project site. However, project construction is estimated to occur over a six-month period and impacts would be short-term and intermittent in duration. In addition, the proposed project and the cumulative projects in the area would comply with local noise ordinances, County general plan policies, and state standards. Therefore, the incremental effects of the project, when considered together with the effects of relevant past, present, and reasonably foreseeable projects, would not create a cumulatively significant impact to the public or environment related to significant noise or vibration.

Transportation

Other projects in the area may be under construction in the same time frame as the proposed project. To the extent that construction periods overlap, there is a potential for cumulative local level traffic impacts from multiple project detours and lane reductions occurring simultaneously in and adjacent to the study area, potentially resulting in deterioration of traffic operations on area local roadways. The City of Coachella, the City of Indio, and the County would coordinate the timing of project detours and lane closures for all projects in the area in order to minimize cumulative traffic impacts. With mitigation measure TRA-1 identified in Section 3.17.3, short-term impacts on traffic/transportation would be minimized and the project would not contribute either directly or indirectly to a cumulatively considerable impact to this resource area.

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

Less Than Significant With Mitigation. As described in the previous sections of this IS/MND, Checklist Responses 3.1 through 3.20, the proposed project would result in less than significant impacts with incorporation of mitigation measures for air quality, biological resources, cultural resources, hazards/hazardous wastes, hydrology and water quality, noise, and transportation/traffic. Implementation of mitigation measures identified in the aforementioned resource areas of this Initial Study are required to reduce impacts to a less than significant level. Therefore, after implementation of the measures, the proposed project would result in a less-than-significant impact on human beings.

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4.0 LIST OF PREPARERS

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5.0 REFERENCES

Applied EarthWorks, Inc. 2018. *Cultural Resource Assessment for the Riverside County Transportation Department's Avenue 48/ Widening Project, Cities of Coachella and Indio, Riverside County, California*. Pasadena, CA: Applied EarthWorks, Inc. April 2018.

California Air Resources Board (CARB). November 2017. *California's 2017 Climate Change Scoping Plan*. 2017. Sacramento, CA. Available on the internet: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed August 2018.

California Department of Conservation (CDC). 2016. Division of Land Resource Protection, Farmland Mapping and Monitoring Program (FMMP). 2016. FMMP Farmland Map: California. Sacramento, CA: FMMP.

California Department of Transportation (Caltrans). 2018. California Scenic Highway Mapping System. Sacramento, CA: Caltrans. Available on the internet: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed January 10, 2018.

California State Water Resources Control Board (SWRCB). 2018. Municipal Storm Water Program. Sacramento, CA: SWRCB. Available on the internet: https://www.waterboards.ca.gov/water_issues/programs/stormwater/municipal.html. Accessed May 2018.

Coachella, City of. 2014. City of Coachella General Plan Update Public Draft EIR. Coachella, CA: City of Coachella. July 2014.

_____. 2015. City of Coachella General Plan Update. Coachella, CA: City of Coachella. Adopted April 22, 2015.

_____. 2018a. City of Coachella, Fire Department. Coachella, CA. Available on the internet: http://www.coachella.org/departments/fire-department. Accessed January 2018.

_____. 2018b. City of Coachella, Police Department. Coachella, CA. Available on the internet: http://www.coachella.org/departments/police-department. Accessed January 2018.

Federal Emergency Management Agency (FEMA). 2018. Available on the internet: https://www.fema.gov/flood-zones. Accessed June 2018.

Federal Transit Administration. 2006, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.

Indio, City of. 2007. General Plan Land Use Diagram. Available on the internet: http://www.indio.org/your_government/city_manager/maps.htm. Accessed January 2018.

Michael Baker International. 2018a. *Avenue 48 Widening Project –Air Quality / Greenhouse Gas Emissions Technical Memorandum*. Irvine, CA: Michael Baker International. August 8, 2018.

_____. 2018b. *Avenue 48 Widening Project – Habitat Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis.* Irvine, CA: Michael Baker International. April 2018.

_____. 2018c. *Avenue 48 Widening Project – Phase I Environmental Site Assessment.* Irvine, CA: Michael Baker International. June 8, 2018.

_____. 2018d. *Avenue 48 Widening Project – Noise Study Report.* Irvine, CA: Michael Baker International. April 23, 2018.

Riverside, County of. 2018. Transportation Improvement Project NPDES Data Form. Riverside, CA: County of Riverside.

Riverside, County of. 2017. County of Riverside General Plan, *Western Coachella Valley Area Plan*. Riverside, CA: County of Riverside.

_____. 2005. *Riverside County Airport Land Use Commission, Compatibility Map*: Jacqueline Cochran Regional Airport, June 2005.

Sunline Transit Agency. 2018. https://www.sunline.org/riding-sunline/routes-and-schedules.

United States Census Bureau. 2018a. Quick Facts, County of Riverside. Available on the internet: http://www.census.gov/quickfacts/table/HSG010215/06065,00. Accessed January 2018.

_____. 2018b. Quick Facts, City of Indio and Coachella. Available on the internet: https://www.census.gov/quickfacts/fact/table/indiocitycalifornia/PST045217. Accessed January 2018.

APPENDIX A

AIR QUALITY AND GREENHOUSE GAS EMISSIONS DATA

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Avenue 48, City of Coachella - Riverside-Salton Sea County, Summer

Avenue 48, City of Coachella

Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	5.00	User Defined Unit	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Approximate site area. Project is a roadway widening.

Construction Phase - Anticipated construction schedule.

Off-road Equipment - Anticipated equipment.

Off-road Equipment -

Off-road Equipment -

Demolition - 450 Tons Demo per County.

Grading - 7,250 CY Earthwork.

Vehicle Trips - Construction only run.

Construction Off-road Equipment Mitigation - Per Rule 403.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	8.00	66.00
tblConstructionPhase	NumDays	18.00	44.00
tblGrading	AcresOfGrading	33.00	4.00
tblGrading	MaterialImported	0.00	7,250.00
tblLandUse	LandUseSquareFeet	0.00	217,800.00
tblLandUse	LotAcreage	0.00	5.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5927	36.3332	22.6377	0.0416	6.4659	1.7976	7.8768	3.4184	1.6722	4.7168	0.0000	4,185.5062	4,185.5062	1.0756	0.0000	4,210.5671
Maximum	**3.5927**	**36.3332**	**22.6377**	**0.0416**	**6.4659**	**1.7976**	**7.8768**	**3.4184**	**1.6722**	**4.7168**	**0.0000**	**4,185.5062**	**4,185.5062**	**1.0756**	**0.0000**	**4,210.5671**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5927	36.3332	22.6377	0.0416	2.9561	1.7976	4.3669	1.5138	1.6722	2.8123	0.0000	4,185.5062	4,185.5062	1.0756	0.0000	4,210.5671
Maximum	**3.5927**	**36.3332**	**22.6377**	**0.0416**	**2.9561**	**1.7976**	**4.3669**	**1.5138**	**1.6722**	**2.8123**	**0.0000**	**4,185.5062**	**4,185.5062**	**1.0756**	**0.0000**	**4,210.5671**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.28**	**0.00**	**44.56**	**55.72**	**0.00**	**40.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0439	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**6.0439**	**0.0000**	**5.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1700e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0439	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.0900e-003	1.0900e-003	0.0000		1.1700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**6.0439**	**0.0000**	**5.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1700e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/30/2019	5	22	
2	Grading	Grading	1/31/2019	5/2/2019	5	66	
3	Paving	Paving	5/3/2019	7/3/2019	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	44.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	906.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4404	0.0000	0.4404	0.0667	0.0000	0.0667			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.4404**	**1.7949**	**2.2353**	**0.0667**	**1.6697**	**1.7364**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0112	0.5109	0.0614	1.5400e-003	0.0350	1.8500e-003	0.0368	9.5900e-003	1.7700e-003	0.0114		163.1984	163.1984	0.0101		163.4518
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0681	0.0393	0.5163	1.2900e-003	0.1255	8.0000e-004	0.1263	0.0333	7.4000e-004	0.0340		128.5653	128.5653	3.6700e-003		128.6570
Total	**0.0793**	**0.5502**	**0.5777**	**2.8300e-003**	**0.1605**	**2.6500e-003**	**0.1631**	**0.0429**	**2.5100e-003**	**0.0454**		**291.7637**	**291.7637**	**0.0138**		**292.1088**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1883	0.0000	0.1883	0.0285	0.0000	0.0285			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.1883**	**1.7949**	**1.9832**	**0.0285**	**1.6697**	**1.6982**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0112	0.5109	0.0614	1.5400e-003	0.0334	1.8500e-003	0.0353	9.2000e-003	1.7700e-003	0.0110		163.1984	163.1984	0.0101		163.4518
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0681	0.0393	0.5163	1.2900e-003	0.1190	8.0000e-004	0.1198	0.0317	7.4000e-004	0.0324		128.5653	128.5653	3.6700e-003		128.6570
Total	**0.0793**	**0.5502**	**0.5777**	**2.8300e-003**	**0.1524**	**2.6500e-003**	**0.1550**	**0.0409**	**2.5100e-003**	**0.0434**		**291.7637**	**291.7637**	**0.0138**		**292.1088**